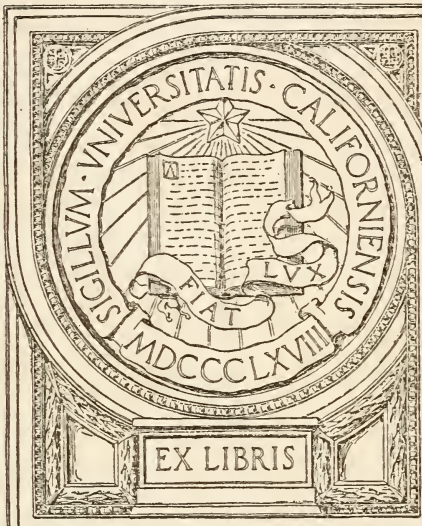
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LUDWIG BUSSLER

ELEMENTARY HARMONY

NEW-YORK G.SCHIRMER

ENID WILLIAMS MEMORIAL



Preface to the Second Edition.

The student will find this to be no entertaining work of literature, but a lesson-book for instructive and thorough practice, which will enable him to gain the routine indispensable in our art and for our time. Misled neither by the transient successes of superficial smartness, nor by the pretentiousness of musical cliques, the young musician should submit himself to a strict course of training, qualifying him to recognize his position with respect to the unceasing development of art.

This second edition has benefitted not only by my own uninterrupted work as a teacher, but also by the aid of the composer, Mr. Heinrich Urban, to whom my best thanks are due for his friendly permission to use his notes.

The method remains unchanged in this edition, but more attention has, in general, been paid to the preliminary exercises. May it continue to further the cause of earnest musical education!

Ludwig Bussler.

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ENID WILLIAMS
MEMORIAL

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Introduction.

1. The Science of Harmony forms the first part, and the foundation, of the art of composition, because in it the fundamental relations of the Modes find their simplest and fullest explanation. It has for its subject the conditions under which tones can sound together and progress in combination. The connecting principle, in harmonic progressions, being the *Melody*, the chief object of the lessons in harmony will be the adding of harmonies to—harmonization of—given melodies.

2. The rules for the art of composition are indispensable aids for gaining a mastery over the material of music; but *they are not* binding *laws for musical art.* Therefore, the finished artist (i. e.: one who is equipped with all the resources of his art) needs these rules no longer, and æsthetic criticism has no right to hold them up as authoritative. Decisive for such criticism are, rather, the *laws* of musical art, which the artist bears in his consciousness, and whose establishment in plain terms is the task of the science of music. The course in composition requires the peculiar limitations imposed by these rules; partly because its sphere is at first necessarily a limited one, and partly to prevent the student from losing time in following wrong paths.

3. The exercises in the harmony lessons are based upon the requirements of the *four-part vocal chorus,* because the conditions, which this latter imposes upon the composer, are the best preparatory school for a good leading of the parts.

However, some of the exercises here given overstep the natural compass of the voices, because the science of harmony undertakes the thorough treatment of tonal relations which pass beyond vocal limitations.

4. The Exercises and Model Examples, arranged for teaching special points, must, of course, not be judged from a purely æsthetic standpoint, but as parts of a methodic whole. Still, they have, besides their importance for the several exercises, this great advantage: That they plainly mark out the degree of skill to be attained through the exclusive study of the science of harmony.

5. The limit of the lessons in harmony is fixed by their relation to the whole art of composition, and to the practical needs of the course of study. Respecting this latter, a course in a public institution, i. e.: class-instruction, is here kept in view, such a course including the conditions of the others. The teacher must be free to fix the length of the course, this naturally depending upon the special aims of the instruction, and the abilities of the pupils.

6. As a preparation for the study of Harmony, thorough familiarity with the rudiments of music, and a certain skill in playing or singing, are required.

REMARK. The Science of Harmony in its present form was created by J. B. Rameau, (d. 1764 in Paris). During its existence of 150 years it has attracted the attention of eminent minds, and its development has, consequently, been rapid and full.

The Science of Harmony.

I. On the Chords of the Key.

The Principal Chords.

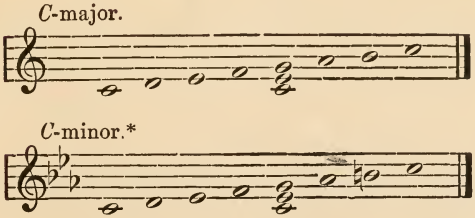
A. The Consonant Principal Chords.

§ 1.

THE TONIC TRIAD.

The *tonic,* the *third,* and the *fifth* of the key form, when combined, the *tonic triad.*

No. 1.



The tonic triad should first be sung, then played on the piano or harmonium, and finally written out,*** in all major and minor keys.**

* The course in harmony is founded on the *harmonic* minor scale.

** For a harmony course the harmonium is preferable to the piano, because each part is fully sustained, especially in suspensions. It is highly advantageous to employ both instruments.

*** These three methods of exhibition should be applied to all similar exercises following.

The intervals of all chords are calculated from the *lowest* tone in the same. Consequently, the tonic triad in major has a *major* third, and in minor a *minor* third: both have a perfect *fifth*.

Every triad with *major* third and *perfect* fifth is called a *major* triad. Every triad with *minor* third and *perfect* fifth is called a *minor* triad. In a *major* triad the third forms with the fifth a *minor* third; in a *minor* triad a *major* third.

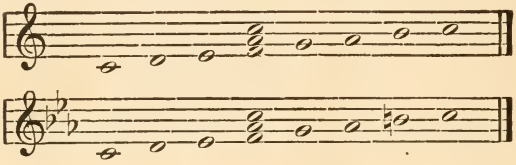
§ 2.

TRIADS OF THE DOMINANT AND SUB-DOMINANT.

If a triad be constructed on the fourth degree of the key, it forms

in *major* a *major* triad,
in *minor* a *minor* triad.

2.

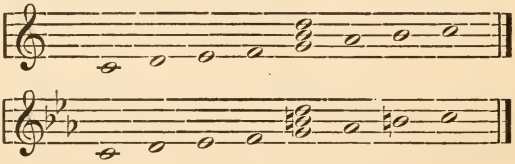


The fourth degree being called, in its relation to the key, the *sub-dominant*, this triad is called the *sub-dominant triad.*

Form this triad in all major and minor keys.

If a triad be erected on the fifth degree, a *major* triad results both in major and minor.

3.



The fifth being called the *dominant*, this triad is called the *dominant triad.*

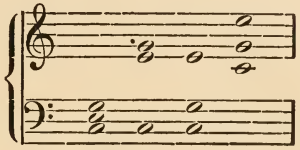
Form the same in all major and minor keys. All three fundamental triads in like manner.

In writing, chords are indicated by Roman numerals corresponding to the degree of their tonic; thus, the tonic triad by I, the sub-dominant triad by IV, the dominant triad by V.

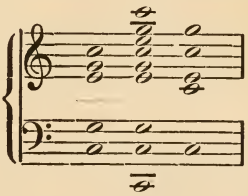
§ 3.

TRANSPOSITION. DOUBLING.

The name of a chord is unchanged by a *transposition* of its higher tones (parts), as long as the bass or lowest tone remains the same;

4. 

and also when, under like conditions, any tones of the chord are repeated in higher octaves, i. e.: *doubled.*

5. 

Form triads with various positions of the higher parts, and also with doublings of the parts.

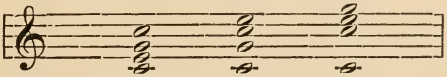
§ 4.

FOUR-PART CHORDS.

Triads are changed to four-part chords by doubling one tone.

RULE. In four-part music the doubling of the third should generally be avoided.

In a four-part chord either the octave (of the tonic), the third, or the fifth, may be in the highest part.

6 

Construct triads in four-part form.

§ 5.

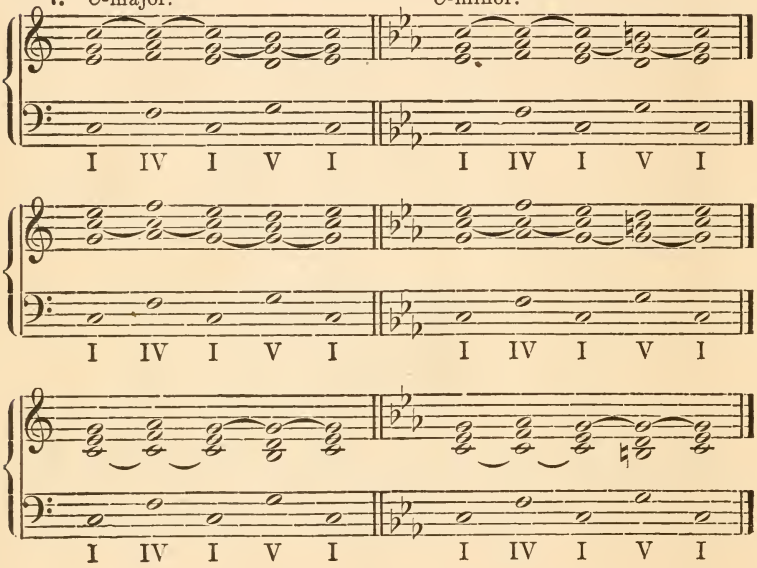
INTERCONNECTION OF THE THREE FUNDAMENTAL TRIADS IN FOUR-PART FORM.

As the connecting link, in the succession of the three fundamental triads, we find

the common tone in the same part.

Interconnection of chords.

7. *C*-major. *C*-minor.



In this example the inner parts are kept as close as possible to the highest part, thus forming *close harmony*. The bass approaches or retreats from the higher parts at will. For the leading of the bass observe the following directions:

Avoid skips more extended than an octave.

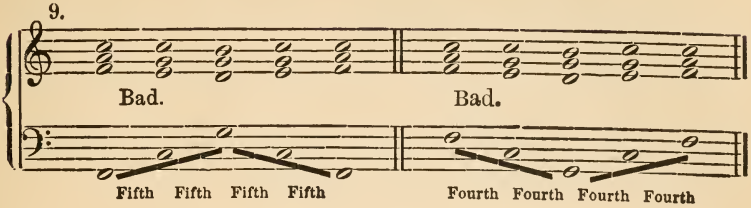
8.

Bad.



Avoid the succession of two fifths or two fourths in the same direction, (motion).

9.



But good:

10.



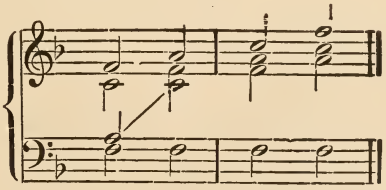
Play at the instrument, in like manner, the chord-progressions I-IV-I-V-I in all keys; 1. with octave as highest tone, 2. with third, 3. with fifth, as shown in No. 7.

§ 6.

CHANGED POSITION OF HIGHER PARTS IN THE CHORD.

Where the melody employs in succession the tones of a chord the inner parts systematically follow it.

11.



Here all tones of the higher parts are found together, but never in the same part.

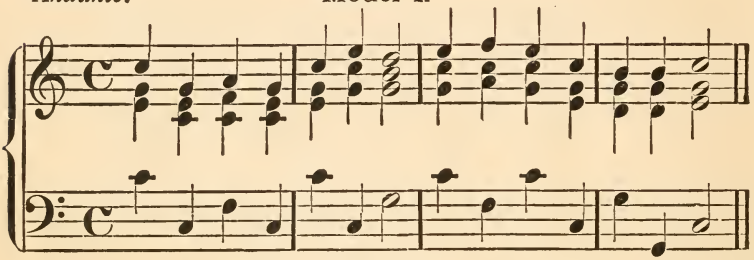
Proceed as above in the following Exercises; but, in progressions between *different* chords, the common tone must be sustained in *the same* part, as directed in the foregoing section.

Exercise 1.

To harmonize, in four parts, given melodies in major and minor, with the three triads.

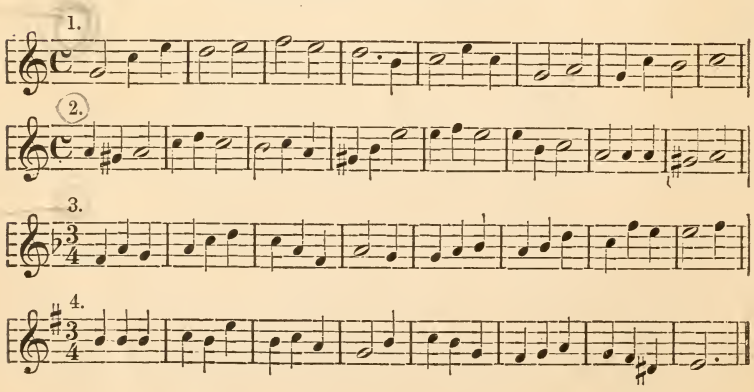
In these exercises, each tone of the melody takes one of the three fundamental triads. *First write out the bass to the entire melody,* then add the inner parts as close as possible to the given highest part. The bass is to be written according to directions found in the foregoing section.

Andante. Model 1.



Here the monotony of the bass is partly relieved by taking the few tones at our disposal in different octaves. The following examples for practice are, like the model, to be worked out on two staves with violin and bass-clefs.

Examples for Practice.



The style of notation should follow the model. For this reason the stems in the soprano are turned up, and the inner parts turned down. In later examples this will be left to the pupil.

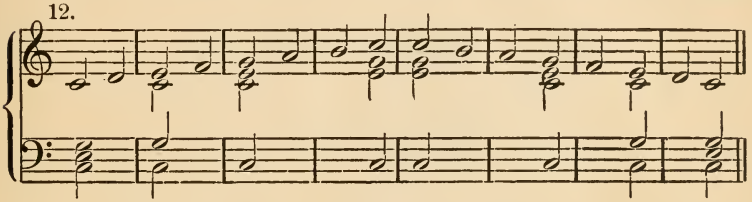
§ 7.

HARMONIZING THE SCALE. FALSE PROGRESSIONS.

As soprano, the ascending and descending major scale is given, and is to be harmonized in four parts with the three fundamental triads. The two inner parts are to be placed as close as possible to the soprano.

First, we will place the tonic triad to all tones which belong to it; i. e.: to the prime, third, fifth, and octave of the scale.

12.



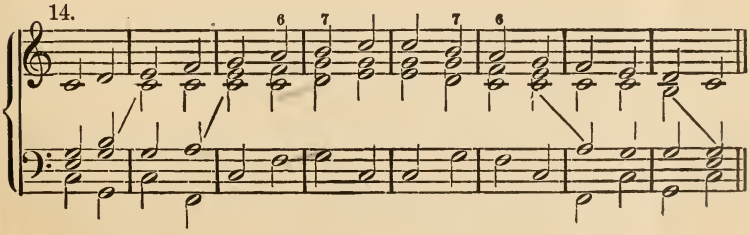
Now, those remaining tones of the scale which belong to the sub-dominant triad, i. e.: the fourth and the sixth, take this chord.

13.



Finally, the second and seventh take the dominant triad, to which they belong.

14.



The example as finished shows, where the melody progresses from the sixth to the seventh degree, **three faults.**

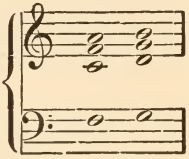
First, while elsewhere, **between two consecutive chords,** a tone common to both is found,

15.

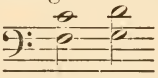


no such common tone connects the chords on the sixth and seventh degrees of the scale.

16.



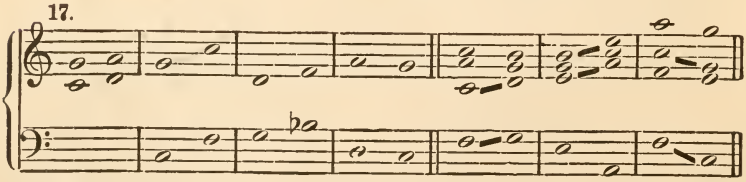
RULE. Two parts must not progress in perfect fifths in succession in parallel motion.

Secondly, the third part (counting from above*) progresses with the bass in parallel fifths  ; that is, both parts, while progressing in the same direction—parallel motion—form the interval of a perfect fifth in both chords.

RULE. Two parts must not progress in perfect fifths in succession in parallel motion.

Consequently, all the following progressions are faulty:

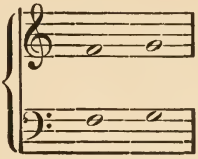
17.



* Comp., by the same author, Elements of Harmony and Notation, *with 58 Exercises,* New York, G. Schirmer.

Thirdly, the second and ~~third~~ fourth parts progress in parallel octaves; that is, both parts, while progressing in parallel motion, form the interval of an octave in both chords.

18.



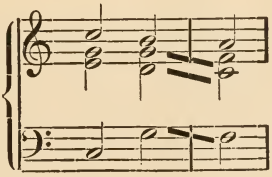
RULE. Two parts must not progress in parallel octaves in succession. Consequently, the following chord-progressions are faulty:

19.



In the descending scale, the same three faults are observable between the seventh and sixth degrees;

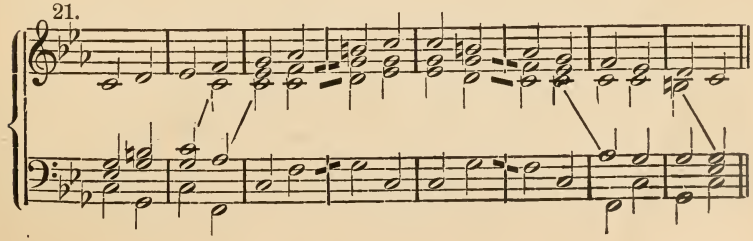
20.



that is, the want of common tones, the parallel fifths, and the parallel octaves.

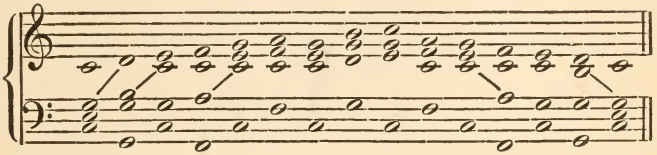
The same faults appear in the same places, when the minor scale is harmonized according to this plan.

21.



To avoid these mistakes, we will abstain, in the next-following examples for practice, from taking the step from the sixth to the seventh degree in ascending, and from the seventh to the sixth degree in descending progression.

22.



Here, in contradistinction to No. 7 and 11, the common tone passes, even in successions of different chords, from one part to another.

Exercise 2.

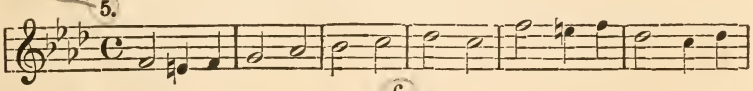
Harmonize the following melodies according to method shown in above scale.

Model 2.

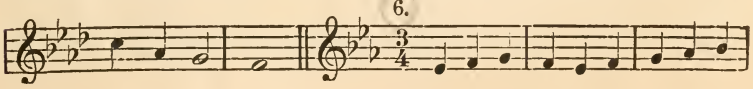


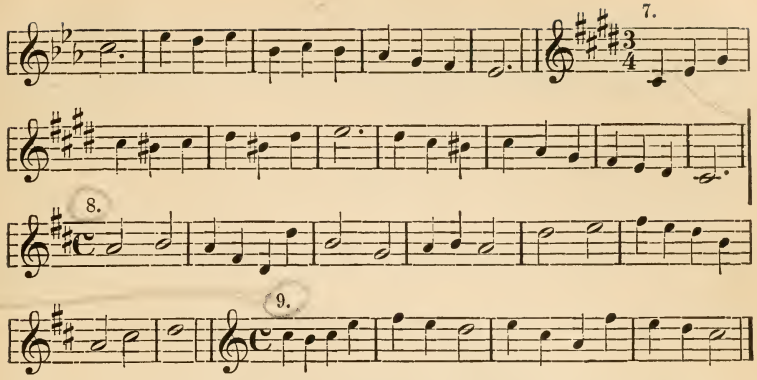
Examples for Practice.

5.



6.

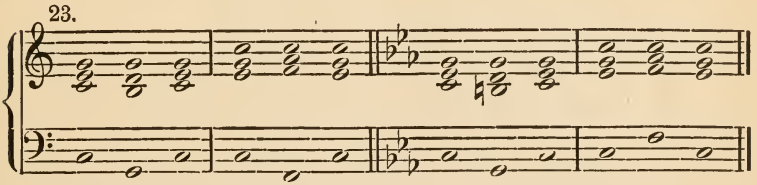




§ 8.

FREER USE OF THE THREE TRIADS.

While each other degree of the scale belongs to but one fundamental triad, the *fifth* is common to both the tonic and the dominant triads, and the *tonic (octave)* to both the tonic and sub-dominant triads (§ 5).

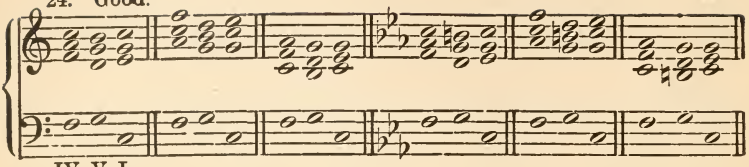


Therefore, wherever the tonic or the fifth appears in a melody, we have the choice between two triads.

Hitherto, we have avoided the progression IV—V (sub-dominant triad to dominant) because no common tone is present. This progression, is nevertheless, allowable, when

1. The bass progresses by a step;
2. The higher parts progress in a contrary direction—in **contrary motion**—to the bass;
3. These two chords are followed by the tonic triad. Under these conditions, IV—V—I is, therefore, allowed. But the reverse progression V—IV—I is *not* allowed.

24. Good.

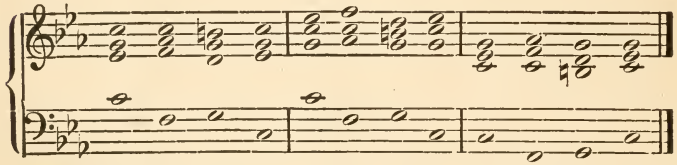


IV V I

The above succession of chords forms a suitable *close (cadence)*, which we can construct from our first examples of chord-connection (No. 7) by omitting the third chord.



25.



Form this close in all major and minor keys, at the instrument

The bass may form as wide an interval as desired with the other parts, and approach them as far as unison with the third part. But, the unison must proceed from contrary or **oblique** motion (where one part moves while the other is stationary); two parts must never progress together in unison.

26.



Wrong progressions can be avoided by contrary motion.

Bass-skips of a seventh are forbidden. A repeated chord is equal harmonically to the same chord. For a change of chords the *strong* beat is preferable.

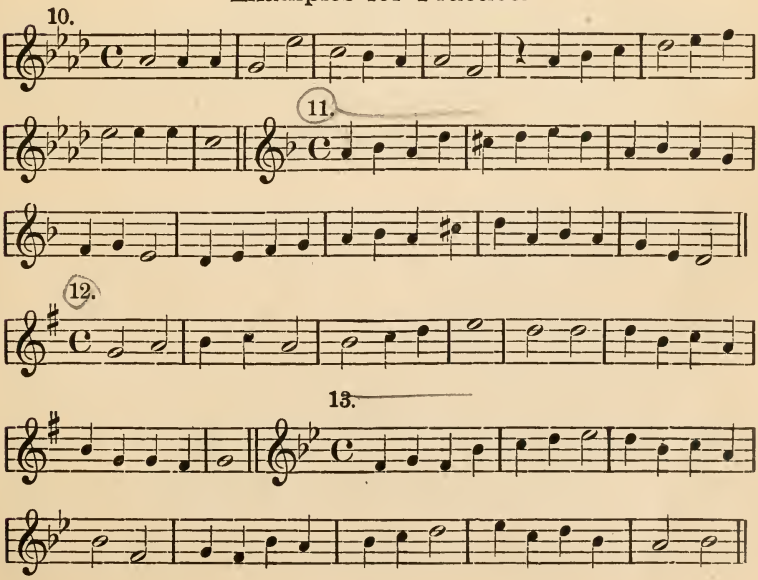
Exercise 3.

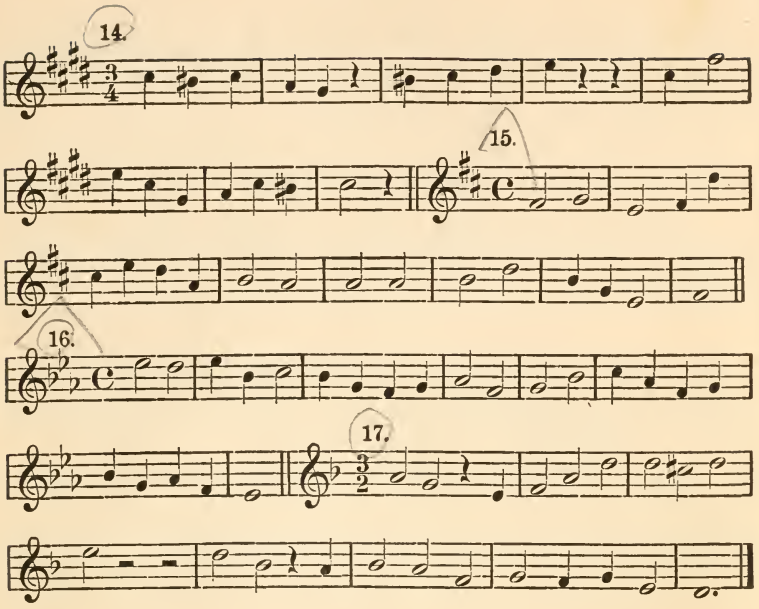
Harmonize melodies with four parts, with the three fundamental triads, according to directions given in this section.

Model 3.



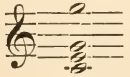
Examples for Practice.





§ 9.

CLOSE AND OPEN HARMONY.

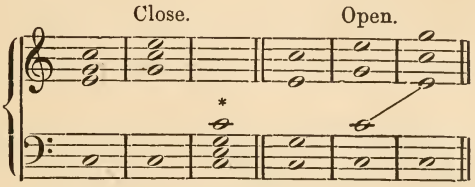
When two parts, in a chord, lie so near together that no tone of the *same* chord can be placed between them, they are said to be in *close position;* e. g.: the two higher parts in this chord:  because no tone belonging to the chord *c—e—g* can be placed between them; or here the three lower parts:  .

On the other hand, when a tone of the same chord can be placed between two adjacent parts, they are in *open position;* e. g.: these three higher parts:  , because the black notes *g* and *c,* belonging to the same chord, can be placed between them.

In former exercises we have placed the inner parts in such a manner as to form close harmony with each other and with the soprano. That form of a chord, in which the three highest parts lie together in close position, is called *close harmony.*

Under *open harmony* is understood, in opposition to close harmony, that form of a chord in which the three highest parts are spread over the compass of an octave or more.

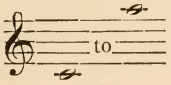
27.

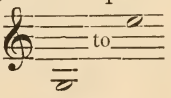


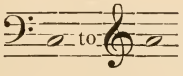
Form triads in open harmony at the instrument.

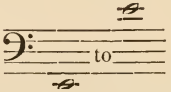
§ 10.

NAMES, COMPASS, AND TREATMENT OF THE PARTS.

In our four-part exercises we name (after the four chief varieties of the human voice), the first part the Soprano; the second, the Alto; the third, the Tenor; the fourth, the Bass. These four parts we shall consider as the instrument for executing our exercises, and confine, for the present, the compass of the soprano from 

, of the alto from 

, of the tenor from 

, exactly an octave lower than the soprano, and of the bass from 

.

The highest and lowest tones of a part must not succeed each other at short intervals.

The lower the parts on the whole lie, the more care should be taken to avoid crowding them below.

---

* An example of closest harmony, because the middle parts lie as close as possible to both outer parts.

To facilitate the leading of the parts, or to carry out harmonization in any desired position, one tone of a chord may occasionally be omitted, and another doubled to take its place. In such a case, *triads* omit the *fifth*.

§ 11.

TREATMENT OF OPEN HARMONY, AND COMBINATION OF BOTH STYLES OF HARMONY.

This new method of harmonization is specially advantageous for the inner parts, which no longer need follow the progression of the soprano.

However, the greater freedom thus attained renders it necessary to consider the general laws for the leading of the parts, in so far as our present purpose requires.

I. The chief faults, in leading the parts, spring from progression in like direction, technically termed

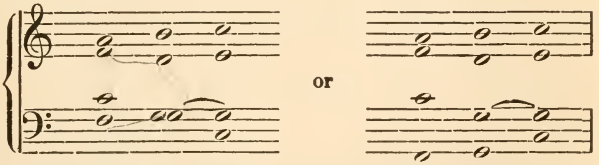
parallel motion,

and may be avoided by leading in a contrary direction, or *contrary motion*. But contrary motion should *never* be employed at the expense of a good leading of any part (e. g.: a bass-skip or a seventh).

Write out in some keys, and play in all, the chord-progressions I—IV—I—V—I (§ 5, No. 7), **in open harmony.**

In harmonizing the scale, all mistakes between the 6th and 7th degrees may be avoided by changing from close to open harmony, thus:

28.



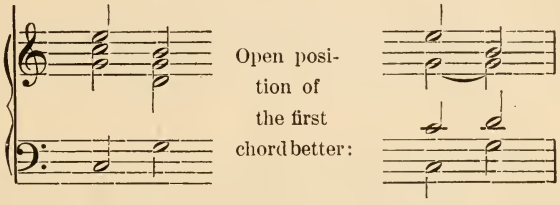
close open open close open open

The reverse progression 7—6 cannot as yet be achieved through open harmony, because its faultiness resides in the succession V—IV itself, and not in the leading of the parts.

II. Of the three highest parts, no two should ever extend farther apart than an octave. The bass may, as we know, retreat at pleasure from the other parts, or approach them up to unison with the tenor. Two higher parts may also join to form a unison, but must *never* progress together in unison.

III. In the leading of the inner parts a tone common to two chords should, where possible, be retained in the same part. Open harmony often renders this possible, where an exclusive use of close harmony would prevent it. E. g.:

29.



Progression by degrees is preferable; more especially ... to avoid simultaneous skips in all four parts; though ... progressions are occasionally employed by composers between *related* chords (i. e.: chords possessing tones in common). ... ips are allowable where a chord is repeated; diminished and augmented intervals should be avoided, where possible, in the inner parts and bass. When unavoidable, the diminished are to be preferred.

Octave skips are permissible in progressions between different chords, but can rarely be employed. Skips of a seventh are not allowed; major sixths in ascending are only allowable when the leading of the part is otherwise favorable; in descending, avoid major and minor sixths. In the inner parts, as in the bass, two skips of a fourth or a fifth in the same direction, either ascending or descending, are not allowed; this is binding for any two more extended skips.

An unmelodic leading of the parts is most easily recognized by **singing** each part separately.

Exercise 4.

Harmonization of Melodies in Open Harmony.

Model 4.



1. The first three chords are written in close harmony ; for, otherwise, it would be necessary either to place the lowest parts very low and close, or to write a unison on the second quarter-note.

2. Here it was necessary to choose close position, because *f* in the tenor would have caused either parallel fifths or a unison in the following chord.

3. Here the fifth is omitted in favor of more open harmony.

4. The leading of the parts requires close harmony here. It is plain, that open harmony cannot be exclusively employed,

but alternates with close harmony as euphony and a good leading may require.

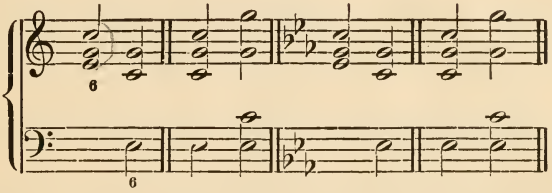
Examples for practice, Nos. 1, 2, 3, 10, 11, 12, 13 and 14, may be used as exercises.

§ 12.

CHORD OF THE SIXTH.

By changing the relative position of the tones of a triad, so that the *third* is chosen as Bass, we obtain the *first inversion* of the triad, the Chord of the Sixth,

30.



or in full, chord of the third and sixth, from the intervals which its higher parts form with the bass. But it is always known by the first name. The chord of the sixth derived from the major triad has a *minor* third and *minor* sixth; that of the minor triad has a *major* third and *major* sixth.

The bass-note of this chord, being the third in the fundamental chord, should not be doubled. (Comp. § 4, Rule).

Form four-part chords of the sixth from triads of all keys.

The chord of the sixth may everywhere be substituted for the fundamental chord, except in the close and (for the present) at the beginning.

Like every newly-learned chord, the chord of the sixth facilitates a good leading. Contrarily, the persistent employment of one style of harmony (either open or close) becomes more difficult.

For variety in harmonization, and in the melody of the bass, the chord of the sixth may be used advantageously in alternation with the fundamental chord.

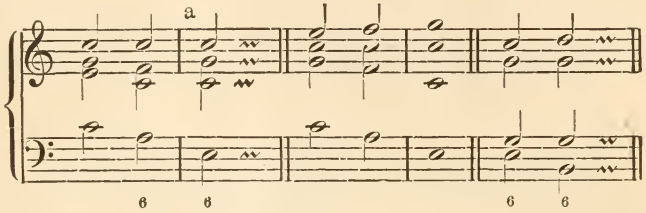
31.



Similarly in minor.

Two successive chords of the sixth, especially in major, and progressing as shown in Ex. 32, *a*, are in vogue among composers.

32.



Three successive chords of the sixth are seldom of good effect.

33.



As compared with the fundamental chord, the inversion secures greater ease and fluency of progression, particularly in the melodic leading of the bass. But if the same inversion be persistently employed, this advantage is lost, and the bass progresses by extended skips, as before.

The following examples show the advantages of using chords of the sixth when a *melody-note is repeated.*

34.



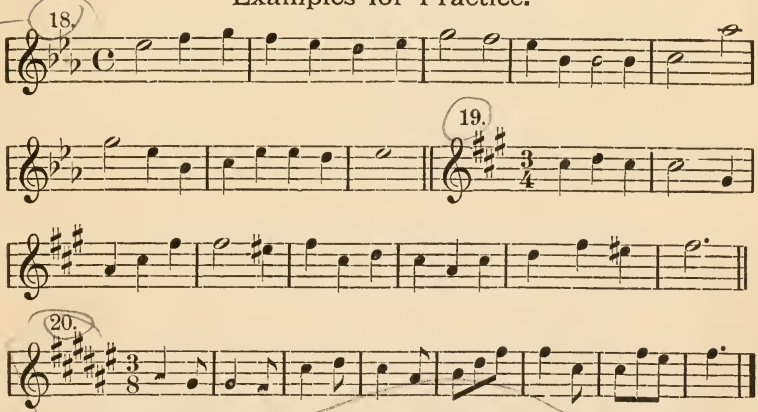
Exercise 5.

Write out the following examples for practice in four parts, using the chord of the sixth.

Model 5.



Examples for Practice.



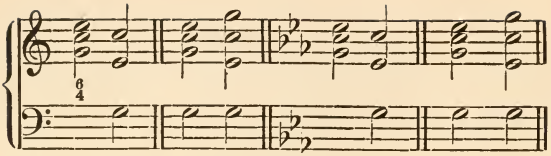
All former examples may be used as exercises.

§ 13.

CHORD OF THE FOURTH AND SIXTH.

By using the *fifth* of the triad as bass-note, we obtain the *second inversion* of the triad, called the chord of the fourth and sixth from the intervals formed by its higher notes with the bass.

35.



The chord of the fourth and sixth derived from the major triad has a perfect fourth and *major* sixth; that of the minor triad has a perfect fourth and *minor* sixth.

The rule, that the *third* of the triad must not be doubled, likewise holds good for the *sixth* of this chord, which was the *third* of the fundamental chord.

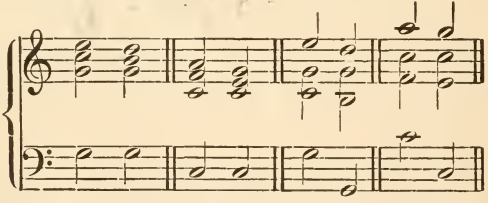
Form four-part chords of the fourth-and-sixth of triads in all keys.

The employment of the chord of the fourth and sixth is dependent upon various conditions. It is even less adapted for a beginning or closing chord than the chord of the sixth.

At first we shall use it only in the following cases:

1. When the chord of the fourth and sixth is resolved to the triad on the same bass-note; the chord of the fourth and sixth occupying a (relatively) strong beat; and both fourth and sixth descending in degreewise progression.

36.



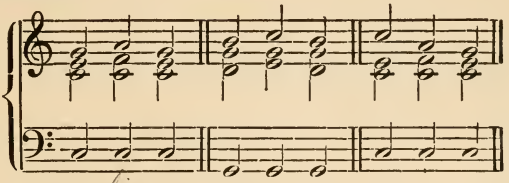
2. When three successive tones in the bass progress by degrees, the middle tone may take a chord of the $\frac{6}{4}$, whose fourth and sixth are not obliged to progress by steps. Beat indifferent.

37.



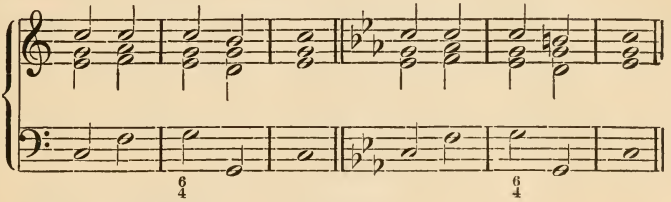
3. With three similar bass-notes, the chord of the $\frac{6}{4}$ is placed over the second note, and fourth-and-sixth progress by degrees. Beat indifferent.

38.



A five-chord cadence results from the succession of chords in § 5, No. 7, if we substitute, for the tonic triad holding the third place, its second inversion (chord of the $\frac{6}{4}$):

39.

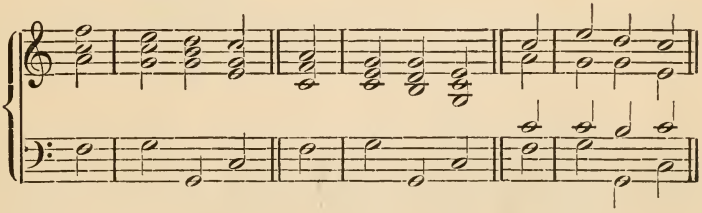


Play this cadence in all keys.

This contains the chords of the fourth and sixth in its by far the most usual application, its employment being otherwise uncommon and restricted.

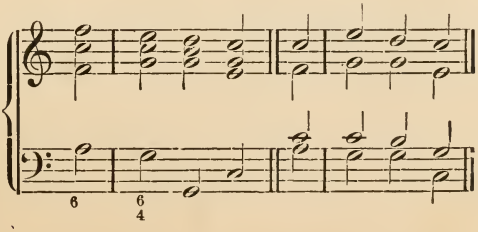
In freer variations:

40.



With chord of the sixth derived from sub-dominant:

41.



The melody sometimes occasions a variation, as compared with directions given under 1, from the degreewise progression of the fourth-and-sixth downward; as in the following cases:

42.



As the chord of the $\frac{6}{4}$ must always fall, in this cadence, upon a relatively strong beat as compared with the dominant triad which succeeds it, it should be observed, that in triple time, or in triple subdivisions of measure, the second beat is held to be stronger than the third, harmonically considered.*

s. = strong, w. = weak.

43.



* The reason of this is given in the science of music, which latter is no field for students of composition. Hauptmann explains the matter from his standpoint in "Harmonik und Metrik".

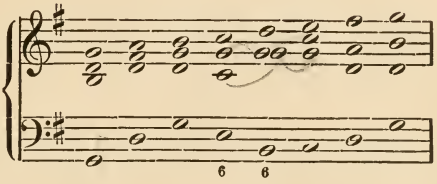


Play at the instrument similar cadences in major and minor keys.

The use of both inversions admits of certain variations in the ascending scale,

44.

usual:



45.

uncommon:



(*G*-major is chosen as better suited to range of voices)

at present these offer no particular advantages.

The gain is greater in the case of repeated tones.

46.



Form similar chord-successions at the instrument.

Exercise 6.

To harmonize melodies in four parts, using the three triads and their inversions in close and open harmony.

Model 6.

Close.

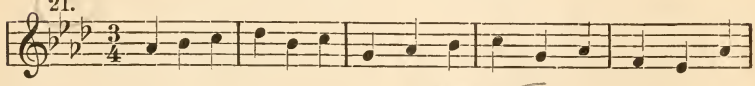


Open.

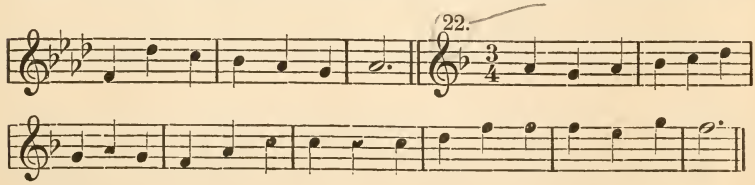


Examples for Practice.

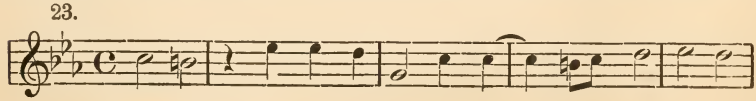
21.

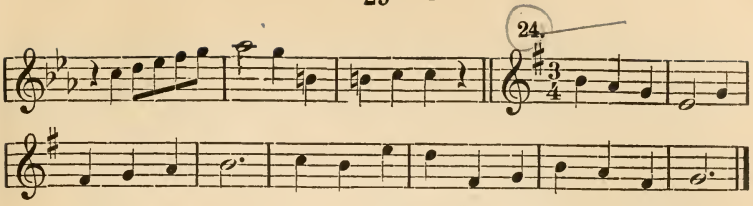


22.



23.





Further examples for practice may be selected from among those under Exercises 1 and 2.

The triad is called, in contradistinction to its inversions, the fundamental chord This is the case with every other chord consisting of a succession of thirds. Major and minor triads are *consonant* chords, because they are not limited to any special succeeding progression (resolution).

B. The Dissonant Principal Chords.

§ 14.

DOMINANT CHORD OF THE SEVENTH.

If the dominant triad be extended upward by adding another third, a chord of four tones is formed, a chord of the third, fifth, and seventh.

47. 

The fundamental (root) of this chord being the *fifth* or *dominant* of the key, the chord is named the chord of the dominant seventh, or, for short, chord of the dominant (dominant chord). This name, chord of the seventh, is also applied to this chord, other chords of the seventh being more especially designated.

Form this chord in all major and minor keys.

The dominant chords of like-named keys are alike.

The third of the dominant chord is major, the fifth perfect, the seventh minor.

Its third and fifth form the interval of a minor third; its third and seventh, a diminished fifth. Its fifth and seventh form a minor third.

The natural and necessary progression (resolution) of the dominant chord is to the tonic triad. Because it requires to be resolved, it is called a *dissonant* chord.

Because it must resolve directly to the tonic triad, it is called a dissonant *principal chord.*

Its resolution is effected thus :

The *third* (leading-note) progresses by a degree upward into the fundamental of the tonic triad.

The *fifth* progresses by a degree downward into the fundamental of the tonic triad.

The *seventh* progresses by a degree downward into the third of the tonic triad.

Although the fundamental is not restricted to any positive progression, it usually moves up or down (when it appears in the fundamental chord) into the tonic (key-note).

48.



Form the dominant chord of the seventh, with resolution, in all major and minor keys, both in close and open harmony.

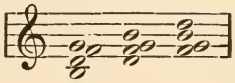
The regular resolution of the dominant chord always produces a triad [here a three-tone chord with one tone trebled is meant] without a fifth.

§ 15.

INVERSIONS OF THE DOMINANT CHORD.

The dominant chord has three inversions:

49.

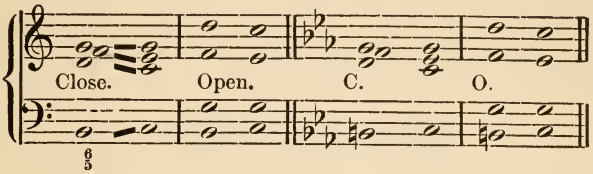


The tones of these are led, on resolution, like those of the fundamental chord; only that the original root-tone usually

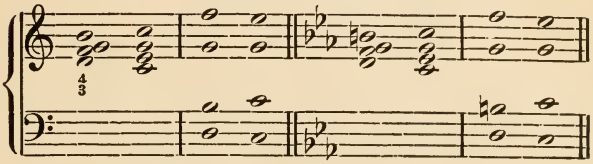
remains stationary, when found in an inner or the highest part, in order to complete the triad resulting.

The inversions are:

1. The chord of the fifth and sixth ($\frac{6}{5}$):

50. 

2. The chord of the third and fourth ($\frac{4}{3}$):

51. 

3. The chord of the second (2):

52. 

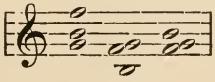
The above chord-names are derived from the intervals, which the two tones forming the seventh in the fundamental chord form with the bass in the inversions.

Name the intervals of the inversions, close harmony being supposed. Then form each of these inversions in close and open harmony, in all major and minor keys and different positions of the higher parts.

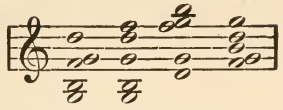
§ 16.

TREATMENT OF THE DOMINANT CHORD.

From the dominant chord the *fifth* may be omitted :

53. 

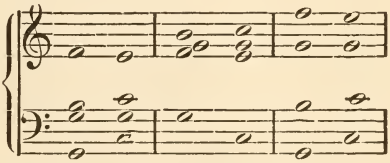
The fundamental is oftenest doubled :

54. 

In regular resolutions a doubling of the third, fifth, or seventh would occasion parallel octaves:

55. 

By omitting the fifth and doubling the fundamental we obtain four-part dominant chords, which resolve to a complete triad, and are, therefore, very useful in closes:

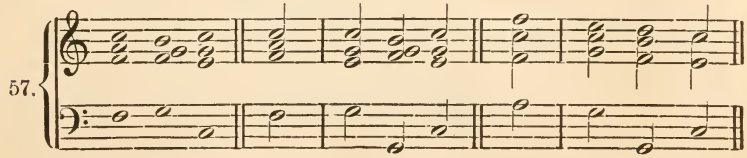
56. 

Form similar closes in all keys.

§ 17.

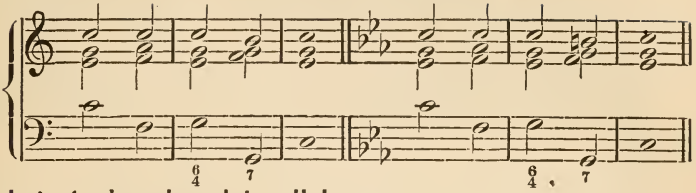
DIFFERENT STYLES OF CLOSE.

To bring about a close, the tonic triad is usually preceded by the dominant chord of the seventh, and by preference as the fundamental chord, because the progression of the bass from one root-tone to another renders the close more firm and decided. Accordingly, the cadences hitherto exhibited generally assume the following form:

57. 

and from No. 7 the following close results:

58.



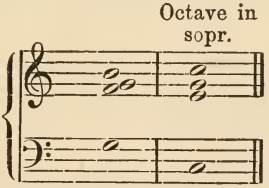
which is to be played in all keys.

But the employment of the dominant triad in cadences is by no means excluded hereby. On the contrary, the triad often takes the place of the dominant chord of the seventh in the former manner.

Many melodies are distinctly divided into sections, though these are not necessarily marked by rests. It is the part of the harmony, to mark these divisions in its own way, by more or less complete cadences.

The most perfect closing chord is one containing, both in melody and bass, the key-note of the scale:

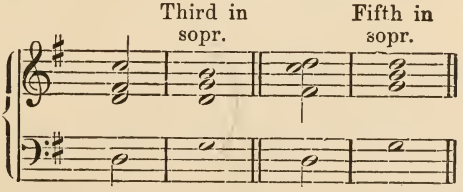
59.



This is peculiarly suitable as the close of an entire composition, although by no means out of place as the close of a period, division, or movement. (Comp. the air "America".)

Closes having the last note of the melody on the third or fifth of the tonic triad are less perfect:

60.



These are well-adapted for partial (or imperfect) closes, but may also be used in the final close. (Comp. Model 6.)

Specially adapted for partial (imperfect) closes are the progressions ending with the fundamental of the dominant :

61.



Similarly in Minor.

At *b*, we perceive how the sub-dominant precedes the harmonic point of rest on the dominant, whereby the well-known progression (sub-dominant—dominant—tonic) is, of course, necessitated.

Such partial closes on the dominant are called *half-closes.* Their employment depends upon the character of the melody. The following melody, for instance, admits of a half-close in the middle.

62.

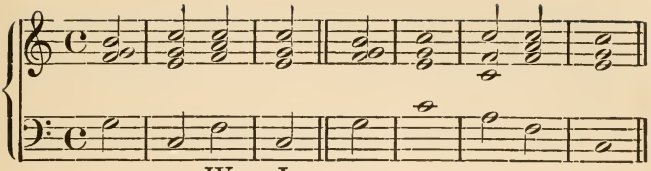


The melody harmonized as Model 7 farther on also affords an opportunity for a half-close in the middle, though it appears more suited to the character of the melody to avoid such a half-close.

Complete and incomplete, full and half-closes, are to be played in various major and minor keys.

The full and perfect close is occasionally followed by a sort of supplementary close employing the sub-dominant triad ; this is the *plagal close.*

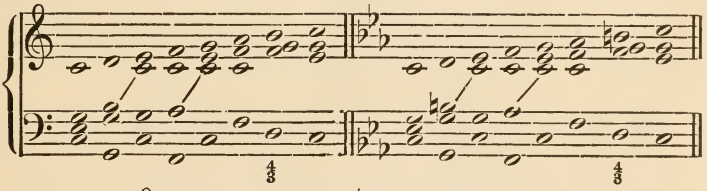
63.



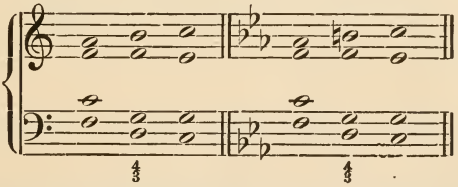
This is also called the *church close*, its peculiarly solemn character having been the cause of its frequent employment in sacred music. It sometimes occurs without any preceding dominant close.

The harmonized ascending scale is more satisfactorily closed by the dominant chord, when this latter is taken as chord of the third and fourth:

64.



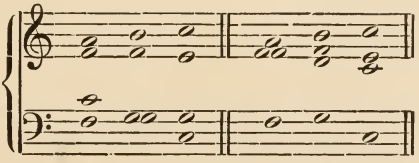
65.



Play the above scale in all major and minor keys.

The employment of the fundamental dominant chord to this end has a less pleasing effect:

66.



For inducing tone-repetition in the melody the dominant chord is also useful, as all its inversions and positions can be resolved against the dominant.

67.



Execute the above at the instrument in different keys.

§ 18.

DOMINANT CHORD OF THE SEVENTH, AND TONIC CHORD OF THE SIXTH AND FOURTH.

The following progressions follow the rules given in § **13** for the treatment of the chord of the $\frac{6}{4}$:

68.



From a combination of both examples results the following freer treatment of the $\frac{6}{4}$ chord, which we shall use in future as occasion offers:

69.



Here the $\frac{6}{4}$ chord enters freely, as at I, and its higher intervals progress downward by degrees; whereas the bass, as at II, progresses downward by a degree into the chord of the second. E. g.:

70.



By means of a slight rhythmical variation we obtain strict harmonic regularity.

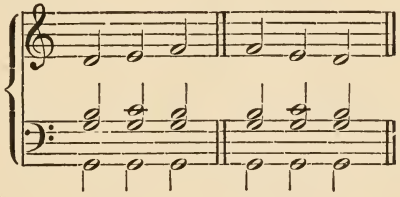
71.



Such rhythmical variations serve to explain many free harmonic leadings.

The chord of the sixth-and-fourth between two other chords on the same bass, may also enter in combination with the dominant chord when the fourth and sixth progress by a degree.

72.



Exercise 7.

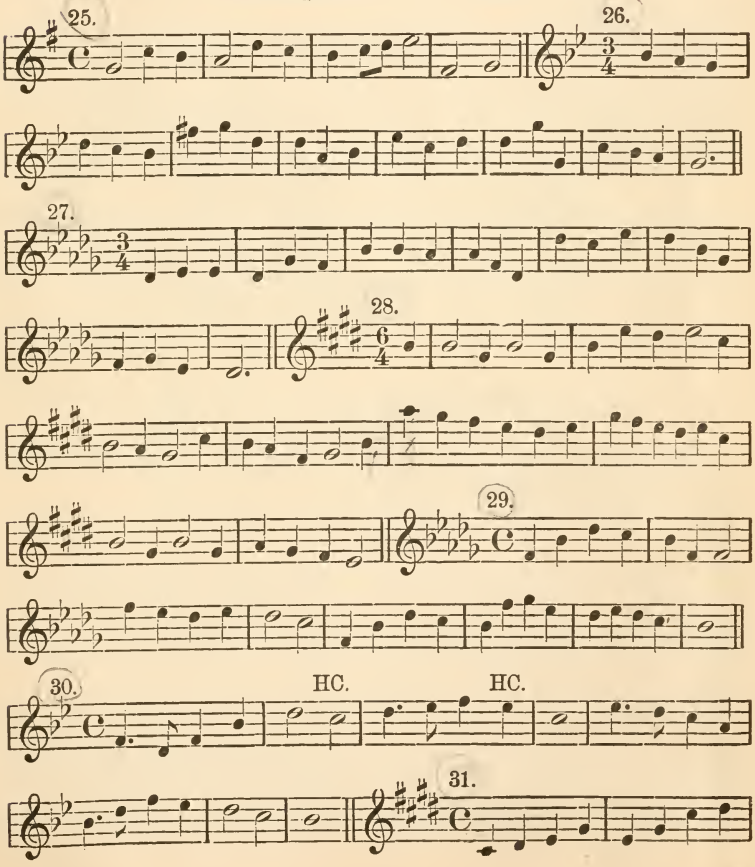
To harmonize melodies in four parts, using the dominant chord and its inversions.

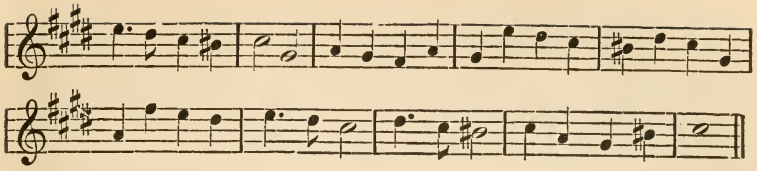
Model **7.**



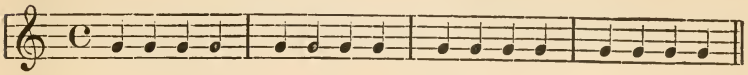


Examples for Practice.





Example of Tone-repetition.

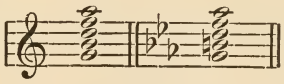


Play in all major and minor keys.

§ 19.

CHORD OF THE NINTH.

If the dominant chord be extended upward by adding to it another third:

73. 

we obtain a five-tone chord whose name, derived from its most extended interval, is the *chord of the ninth.*

The ninth in major being major, this chord is called in a major key a *major* chord of the ninth. The ninth in minor being minor, the chord is in minor called a *minor* chord of the ninth.

Like the chord of the dominant seventh, it is a dissonant principal chord, resolving directly to the tonic triad. The ninth is resolved by a step downward into the fifth of the tonic triad; the remaining intervals are resolved as in the dominant chord, excepting that the fifth of the major chord of the ninth must be resolved upwards, to avoid parallel fifths.

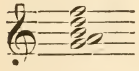
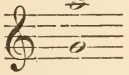
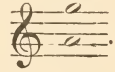
74. 

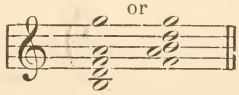
Although actual parallel fifths would not be formed, in minor, by the *downward* progression of the fifth (the first fifth in the progression not being perfect), still it is best to avoid this resolution in minor also, wherever possible. The minor mode exhibits here, as in other cases, a curious dependence upon the major; that is to say, progressions which are faulty in major are held to be so in minor, and are consequently avoided, although in minor the rules are not transgressed. To an attentive listener, chord-progressions like these:

75. 

will afford convincing proof. The hypothesis of so-called covered fifths and octaves, formerly offered in explanation of similar cases, is too contrary to the nature of our musical system to find acceptance in a course of composition.

The regular resolution of a five-tone chord of the ninth always yields a triad with doubled third, thus necessitating an exception to the rule given before.

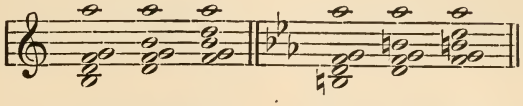
The ninth, either in the fundamental chord or an inversion, must never be so placed as to become a second  ; for the principle of chord-formation by successive thirds would thereby be abandoned, and the chord of the ninth thus stricken out of the list of chords in a limited sense. Neither should the two parts forming the interval of the ninth be mutually inverted, so as to place the original ninth in the lowest part and the original fundamental in the highest: e. g.:  must never become  . It is only necessary to strike such an inverted chord, e. g.:

76. 

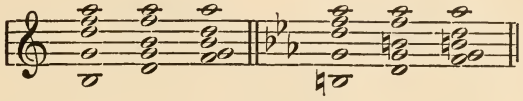
to make plain the need of this rule. (Elem. of Harm. and Notation, § 133.)

The ninth, therefore, must neither be contracted to a second, nor inverted to a seventh. — Hereby, the employment of this chord and its inversions is shown to be limited, and the last (fourth) inversion quite excluded. The serviceable inversions of the chord of the ninth follow, in as close harmony as practicable.

77.

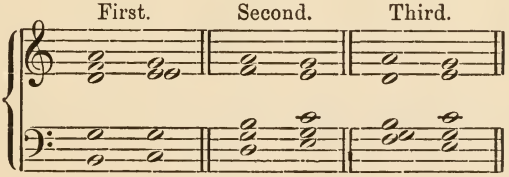


78.



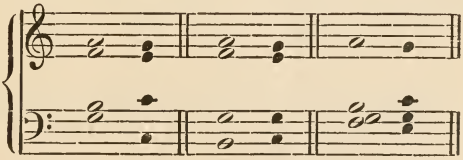
The ninth being excluded from the inner parts, there remain to be employed only those of the first, second, and third inversions which have the ninth in the highest part.

79.



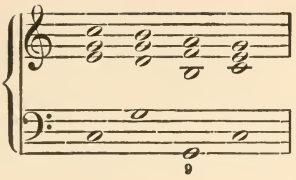
This chord becomes a four-tone chord by omitting the fifth; whereby the second inversion is lost.

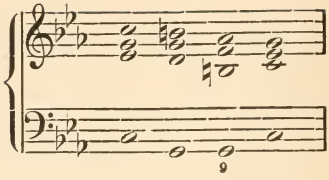
80.

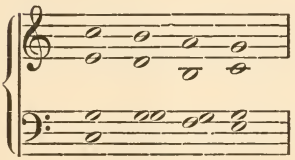


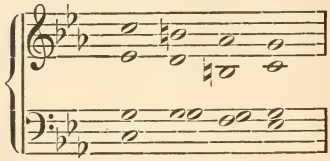
Form the chord of the ninth, together with allowable inversions, and its resolutions, in all major and minor keys.

By the aid of this chord, the descending scale can now be well harmonized between the seventh and sixth degrees.

81. 

82. 

83. 

84. 

The entrance of a dissonance of the ninth by a skip in both parts should be avoided both in parallel and contrary motion.

Not allowable:

85. 

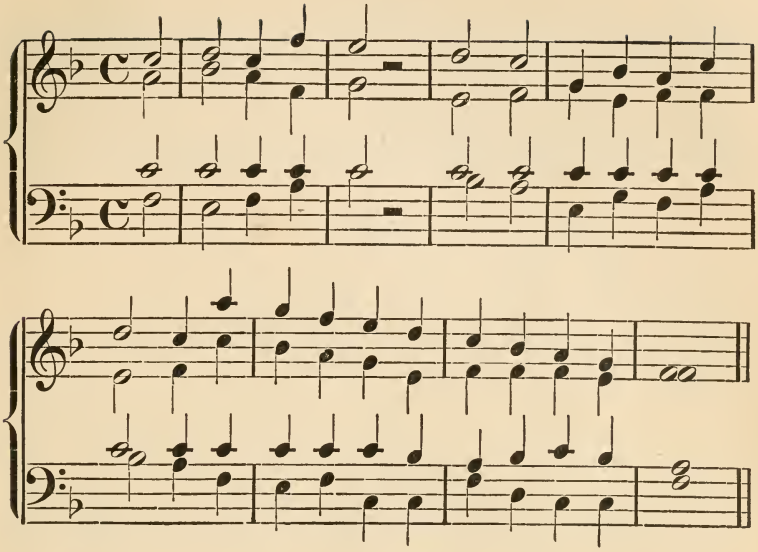
Nearly as unallowable in contrary motion:

86. 

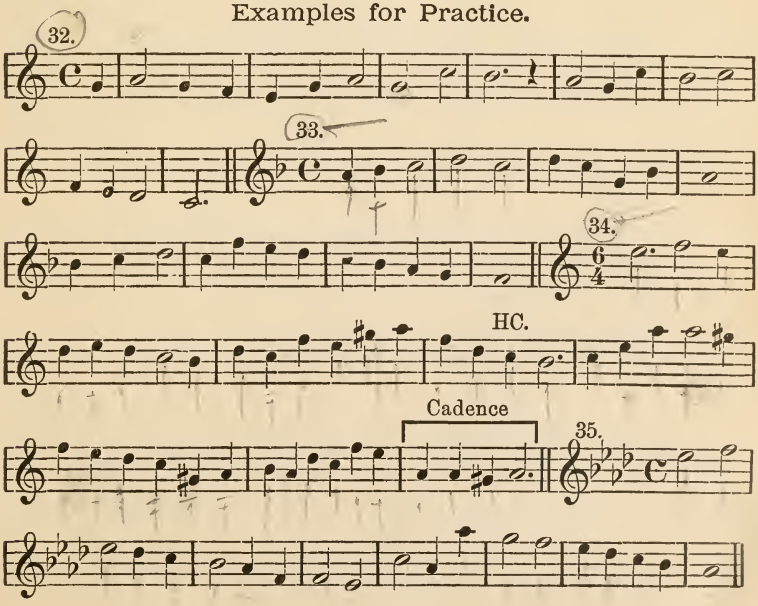
Exercise 8.

Harmonize the following melodies in four parts, employing the chord of the ninth and its inversions.

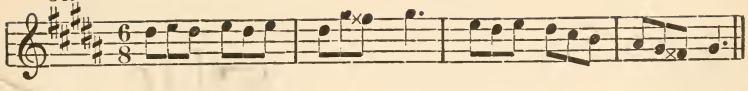
Model 8.



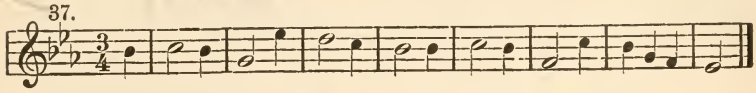
Examples for Practice.



36.



37.

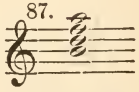


§ 20.

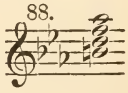
MINOR AND DIMINISHED CHORD OF THE SEVENTH.

If we form, on the seventh degree of the scale, a chord of the seventh, we obtain

in major, the minor chord of the seventh 87.

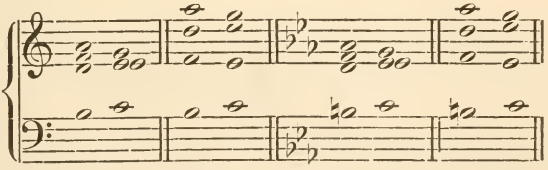


in minor, the diminished chord of the seventh 88.



The minor chord of the seventh comprises the four highest tones of the major chord of the ninth; the diminished chord of the seventh comprises the four highest tones of the minor chord of the ninth. Both are dissonant principal chords, resolving directly to the tonic triad. The resolution of the several tones is in both chords the same as in the chord of the ninth.

89.



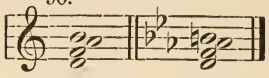
The minor chord of the seventh has minor third, diminished fifth, and minor seventh. The diminished chord of the seventh has minor third, diminished fifth, and diminished seventh.

In the minor chord of the seventh, the adjacent tones form the intervals of two minor thirds and one major third; in the diminished, three minor thirds.

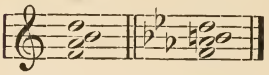
The inversions of both chords bear the same names as the corresponding inversions of the dominant chord, namely:

90.

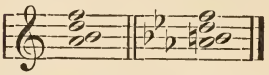
Chord of the fifth and sixth:



Chord of the third and fourth:



Chord of the second:



The *minor* chord of the seventh and its inversions are employed like the chord of the ninth, inasmuch as the original seventh remains in the highest part, the chord of the second thus being excluded.

This limitation does not bind the *diminished* chord of the seventh; which can, on the contrary, be employed in all its positions and inversions. Its third inversion resolves to the tonic chord of the fourth-and-sixth, and can, therefore, be employed only when this latter can progress regularly, i. e.: in this case downward by a degree. E. g.:

91.



Form both chords and their inversions, with resolutions, in all major and minor keys.

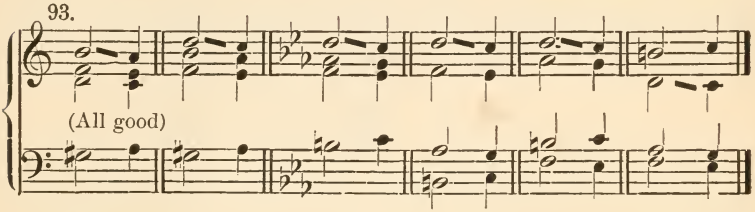
It is allowed, on resolving the $\frac{6}{5}$ chord derived from either, to lead the original fifth by a step downward in the highest or either inner part, thereby avoiding a doubled third in the resulting triad.

92.



In the diminished chord of the seventh the third, both in the fundamental chord and second inversion, may progress downward by a degree when its second diminished fifth (as *b - f* in the chord of *g♯ - b - d - f*) is inverted to an augmented fourth.

93.



Whereas, in the exception under No. 92 only the seventh progresses downward, and the other three parts upward, in the above only the fundamental progresses upward, the other three parts being led downward. Consequently, in harmonizing the scale, the *minor* chord of the seventh can be employed only at 6—5 in the melody; the diminished chord, however, at 2—1, 2—3, 4—3, 4—5, 6—5, and 7—8.

Both the chords are harmonically better adapted, for the progression 7—6 in the descending scale, than the chord of the ninth. As we are now for the first time enabled to harmonize this scale, we introduce here, as second chord before the last, the chord of the sixth and fourth, so that the last five chords form our five-chord cadence (§ 13, No. 39).

94.

Major.

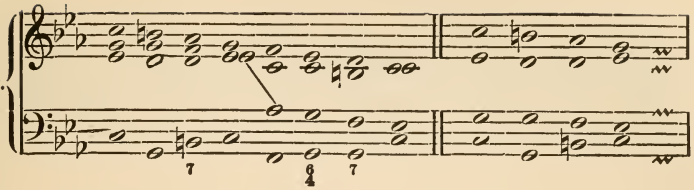


or: 95.



96.

Minor.



or: 97.



Play the harmonized scale by heart in all keys, ascending and descending.

Exercise 9.

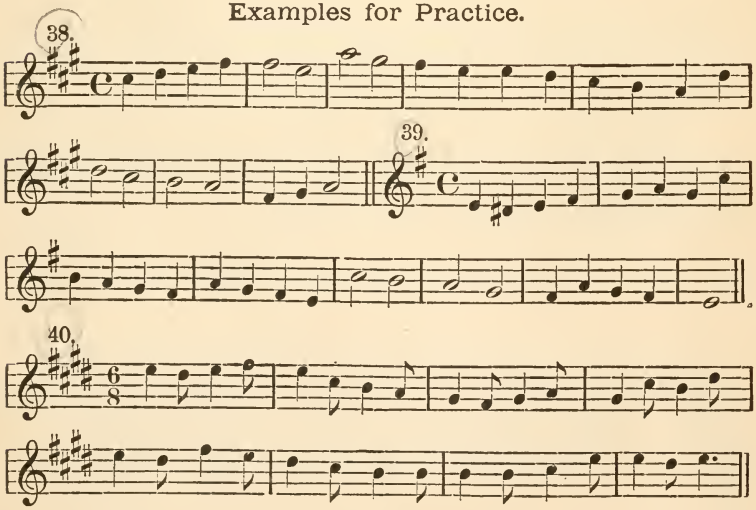
Harmonize the following melodies in four parts, employing in major the minor chord of the seventh, in minor the diminished chord of the seventh.

Model 9.



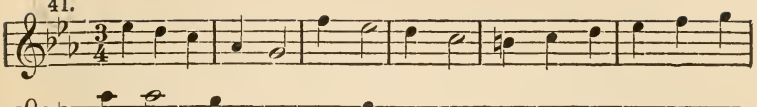


Examples for Practice.

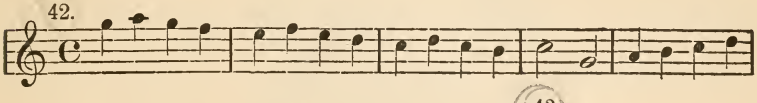


N. B. Here the diminished fifth follows the perfect. Although unobjectionable to the ear, the eye, assisted by an unconscious dependence upon the major mode, is offended by it.

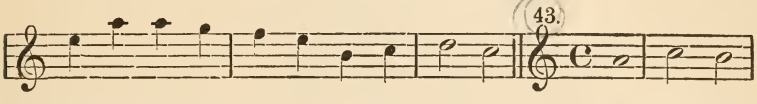
41.



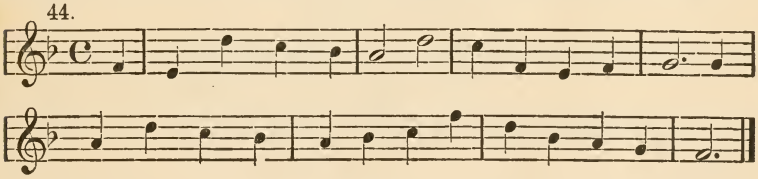
42.



43.



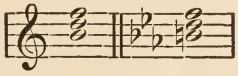
44.



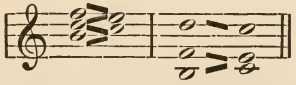
§ 21.

THE DIMINISHED TRIAD.

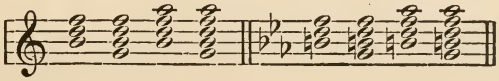
If we construct, on the seventh degree of the scale, a triad, we obtain for major and minor *the same diminished triad.*

98. 

The diminished triad comprises both in major and minor the three highest tones of the dominant chord, and is treated like this latter.

99. 

It is an integral part of each of the other dissonant chords resolving to the tonic triad:

100. 

but is least of all adapted for determining (fixing) the key; for it may be mistaken, not only for a subordinate chord, but also for a fraction of some diminished chord of the seventh.

By doubling the third, it becomes a four-part chord.

101.



Its resolution yields a triad without fifth, and with doubled third.

Its two inversions are called, like those of any other triad:

102.

Chord of the sixth:



Chord of the sixth and fourth:



Its higher parts form, with the bass:

In the fundamental chord, minor third and diminished fifth;
In the chord of the sixth, minor third and major sixth;
In the chord of the $\frac{6}{4}$, augmented fourth and major sixth.

In resolving the chord of the sixth derived from this triad, we have the same liberty as with the $\frac{6}{5}$ chord derived from the minor and diminished chords of the seventh, namely:

The original fifth may be led downward in the inner parts. On account of this double resolution, it may also be doubled, but only in this first inversion.

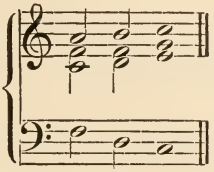
103.



Form the diminished triad and its inversions, with resolutions, in all major and minor keys.

The chord of the sixth derived from the diminished triad, may be substituted for the dominant chord in the ascending scale, No. 64: the close hereby loses in firmness, but the leading of the parts gains decidedly.

104.



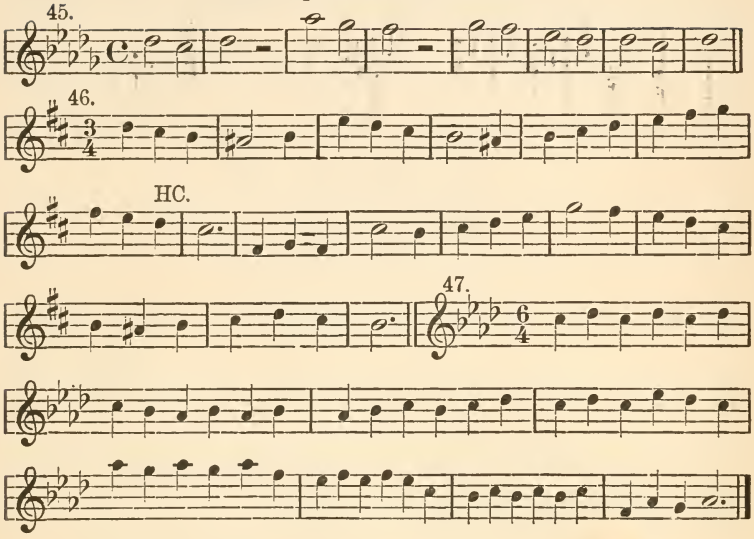
Exercise 10.

Harmonize the following examples for practice in four parts, employing the diminished triad.

Model 10.



Examples for Practice.



§ 22.

FREER TREATMENT OF THE CHORDS.

The pupil, having hitherto employed

the chord of the fourth and sixth only under special conditions (§§ 13, 18),

the dominant chord, and chord of the ninth, only with a strictly regular resolution,

the other dissonant chords resolving to the tonic likewise only under special restrictions,

is now sufficiently grounded in the elementary laws of chord-progression and the modes to employ intelligently the following free leadings.

1. The *fifth* of the dominant chord may also progress upward by a step, in any part.

2. To secure completeness of the tonic triad, the intervals of the dominant chord in the inner parts are frequently resolved irregularly, particularly at closes, being then resolved to that tone which would be omitted by their regular resolution.

105



As the various positions of the intervals of any chord exercise an influence on the harmonic effect, such irregular resolutions of the inner parts are often occasioned to bring in some desired or agreeable chord-position.

106.



An irregular resolution may also occasionally be allowed to secure a better leading of the parts; e. g. to avoid monotonous repetition of a tone or phrase:

107.



or to give a part greater variety of position:

108.



But in such cases only the *third* or *fifth* of the dominant chord may progress by a skip, and *not* the *seventh:*

109.



The melody of the soprano, and the exigencies of good leadings at the same time, particularly in the bass, give occasion for like free leadings of, with similar restrictions for, the soprano. E. g.: if the following leadings are found in the given melody:

110.



they may, to secure a good leading of the bass, be harmonized in the following manner:

111.



in comparison with which, regular leadings would in most cases seem awkward, as the following examples show:

112.



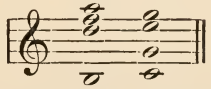
3. The other dissonant chords resolving to the tonic participate in this liberty of leading:

113.



In the resolution of the minor and diminished chords of the seventh, the skip from its third downward to the fifth of the tonic triad is employed, in the inner parts, with peculiar frequency by the classic composers.

114.



On the contrary, the *ninth* in the chord of the ninth, and the same interval as *seventh* in the major and diminished chords of the seventh, are always resolved regularly.

In the bass part the pupil must take none of the liberties permitted under 2 and 3.

4. Those dissonant chords resolving to the tonic, which are equally admissible in all positions and inversions, namely, the dominant chord of the seventh, the diminished chord of the seventh, and the diminished triad, are allowed before resolution to alter their positions and inversions, provided that the last position or inversion so formed be then satisfactorily resolved.

115. a-minor.



Or, for the better leading of the parts, the dominant triad may be introduced in passing for the dominant chord of the seventh.

116.



5. The dissonant chords resolving to the tonic triad may, before resolution, alternate with each other and with the dominant triad (as a substitute for the dominant chord of the seventh), provided that the chord last employed shall be satisfactorily resolved. — In such cases, neither the ninth in the chord of the ninth, nor the seventh of the *minor* chord of the seventh, should be led downward.

117.





118.

Not thus:



But, when this melody is given, thus:

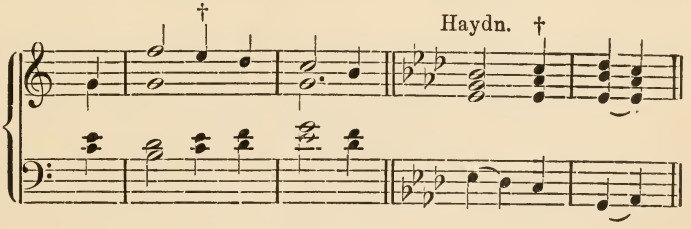


The chords in Chap. II. will render better leadings possible.

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6. The third of the triad may also be doubled, to benefit the melody or the leading of the parts, when the resolution of the preceding chord does not demand it.

119.



---

7. The fundamental of the dominant chord may progress to any interval of the tonic triad. But here the **Rule** must be observed, that in parallel motion the second should never progress to the unison, or the seventh to the octave.

120.

Wrong:



The classic composers wrote such progressions even more seldom than parallel fifths or octaves.

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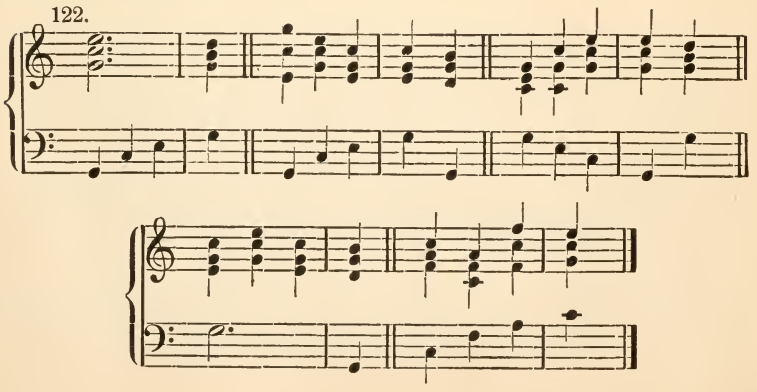
8. The chord of the fourth and sixth, as an inversion of the dominant triad, has already occurred in free leadings with a skipping bass. (Comp. 5, above.) The tonic and dominant chords of the fourth and sixth take the like liberty, where the bass moves in intervals belonging to those triads; the higher parts may then also change their position:

121.



and also when the resolution of the $\frac{6}{4}$ chord is retarded by similar harmonic progressions in the bass, the higher parts, or all parts together:

122.



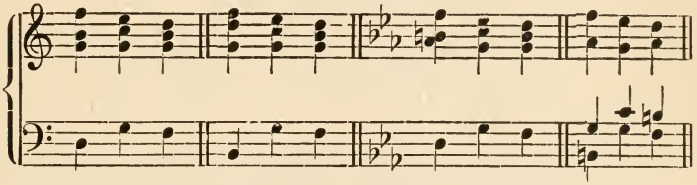
The $\frac{6}{4}$ chord may follow the chord of the ninth, as well as the chord of the seventh (No. 72).

123.



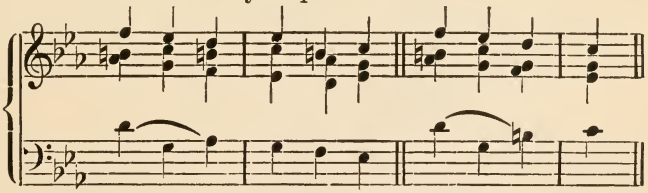
The $\frac{6}{4}$ chord is also introduced by a skip in the bass between dissonant chords resolving to the tonic triad.

124.



Examples like these, where the bass reaches the $\frac{6}{4}$ chord by a skip *upward* and then progresses degreewise downward, are most favorable. Less so are those in the opposite direction, or when the bass continually skips:

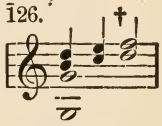
125.



9. To secure a better leading of the parts, tones other than those already designated may be omitted, as:

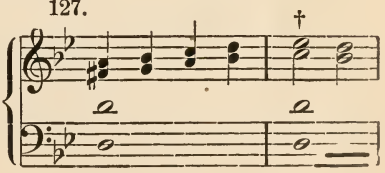
The *third* of the dominant chord,

126.



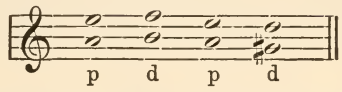
Third or *seventh* in chord of the ninth,

127.



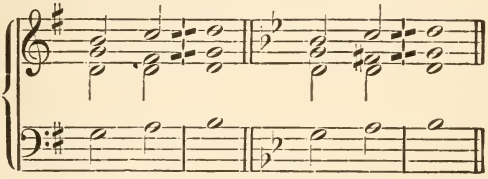
Third or *fifth* in the minor and diminished chords of the seventh.

10. The progression of fifths, *perfect* to diminished,

128. 

is always correct, though the *upward* progression gives rise to the scruples mentioned under **Model 9**, having like origin with those under No. 75, p. 40.

The progression of fifths, *diminished* to *perfect*, **upward**, is very common between the *two highest parts*,

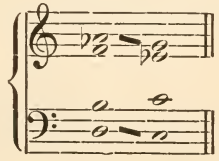
129. 

although, between the *bass* and a *higher part*,

130. 

it is avoided by the classic composers, its occurrence with the latter being rare; whereas modern masters often employ it.

The progression of fifths, *diminished* to *perfect*, **downward**, is also avoided, and is so rare between *bass* and *soprano* that it may be designated as inadmissible:

131. **Inadmissible:** 

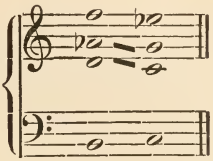
likewise to be avoided between *soprano* and an *inner part*, or *bass* and an inner part:

132.



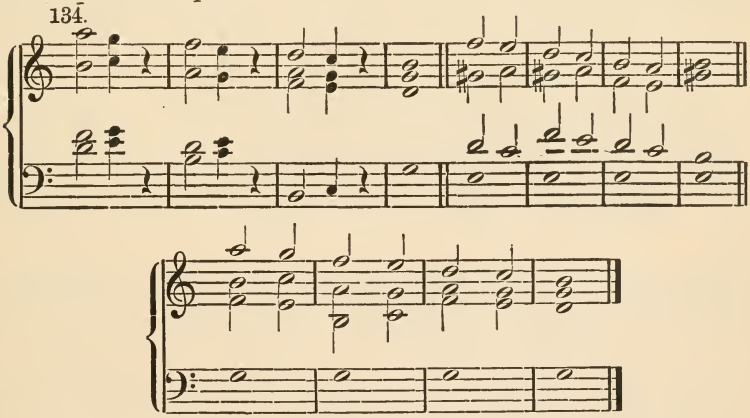
though admissible, by way of exception, between **two** inner parts:

133.



11. The *seventh* in the minor chord of the seventh, and the ninth in the chord of the ninth, may occur as an exception in an inner part.

134.



In the above cases, the resulting unusual positions are generally induced by the foregoing.

On account of their great frequency, all these liberties find their proper place in this first section of the science of composition; the pupil will immediately comprehend them, the more, as he is familiar with them from the practical side. Their correct employment naturally depends upon the pupil's musical judgment, which will have been essentially strengthened by the preceding exercises.

Exercise 11.

Harmonize the following melodies in four parts, in major and minor, with the seven principal chords and their inversions, occasionally employing the liberties allowed in the treatment of the same.

Model 11.*

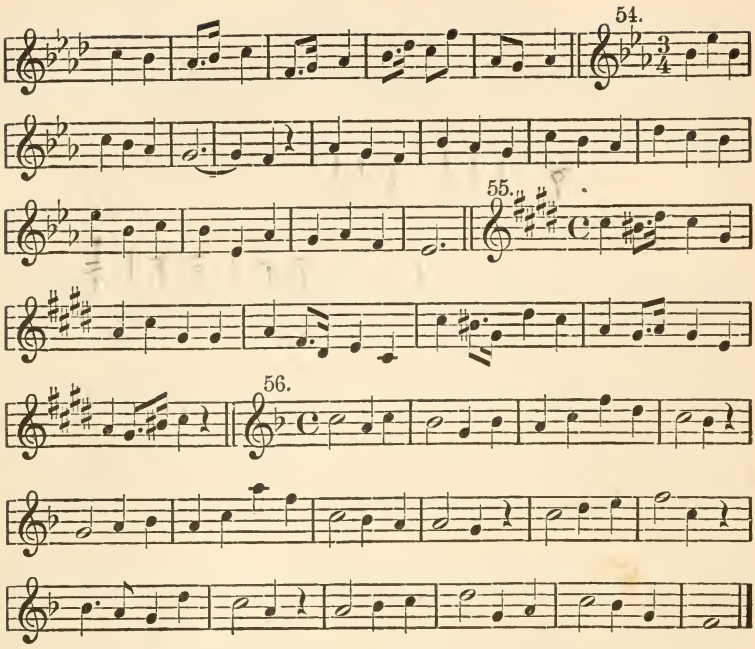


N.B. here indicates a place where one of the free leadings permitted has been employed.

Examples for Practice.

As far as the rules permit, the pupil's aim and endeavor should be to write an harmonious or even expressive bit of music, *but not*, unless this should be specially required, to employ to an extreme the devices last explained. The examples are so arranged as to necessitate their sufficiently frequent use.





The Subordinate Chords.

§ 23.

MAJOR AND MINOR SUBORDINATE CHORDS.

If we form a triad on each degree of the scale

135. 

we obtain in *major*, besides the four principal triads already known to us, *three minor triads* on the *second*, *third*, and *sixth* degrees; and in *minor*,

136. 

besides the principal triads, a *diminished* triad on the *second*, an *augmented* triad on the third, and a *major* triad on the *sixth*.

Of all these, the major and minor triads are employed as independent chords. Thus we have gained in major *three new chords*, in minor *one*. (For the present we take no notice of the triads on second and third in minor).

Within the key, the subordinate triads chiefly serve as connecting links between two principal triads with each of which they have *two* tones in common; thus:

Between dominant and tonic; between tonic and subdominant.

137.



Under like conditions, the subordinate triad may also connect principal consonant and dissonant triads, in which case the dominant triad again asserts its right to represent the dissonant principal chord:

138.



All these interconnections are founded upon a bass *descending* by thirds. The inversion of this progression by thirds to one by sixths should be avoided, as it contradicts the idea of connection or mediation by aiming beyond the commendable.

The interconnection of the chords in the reverse direction — sub-dominant with tonic; tonic with dominant — does not bear the character of a mediation, but has rather an unexpected effect.

139.



This effect is caused by the fact, that the bass-tone, which enters decidedly like a *third*, is treated by the other parts, contrary to its nature, as a *fundamental*. Where an unexpected effect is in place, such a succession of chords is, of course, justifiable.

Except in their capacity as connecting links, subordinate triads are placed in the foreground only in solemn vocal music, to call to mind the ancient church style. By Handel and Bach they are employed partly to this end, partly as influenced by the leading of the parts; seldomer in the Haydn-Mozart-Beethoven period, because the composers sought harmonic variety more in modulation.

For employing these chords the rule given in § 5 holds good, *that they must be connected with each other, or the principal chords, through common tones.*

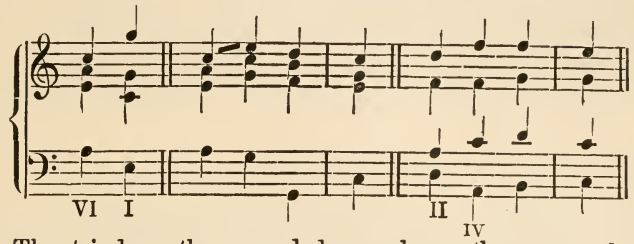
Those subordinate triads which, considered as *tonic* triads, belong to related keys, possess one tone in common; e. g., in *C*-major, the *a*-minor triad and the *e*-minor triad; or the *a*-minor triad and the *d*-minor triad.

140.



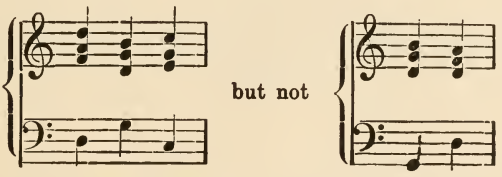
By employing inversions of the principal chords, such successions of triads: as are founded on a bass *ascending* by thirds (No. 139), lose their uncertain character.

141.



The triad on the second degree bears the same relation to the dominant triad as does the sub-dominant triad (§ 8). Under the same conditions it may precede the dominant triad, but cannot follow the latter. (II—V—I=IV—V—I, V—II=V—IV).

142.



As useful piano-practice in all keys, and as a preparation for Exercise 12, the bass of the following example demands the principal and subordinate triads; the position of the higher parts, and close or open harmony, being chosen at pleasure. It begins with the dominant triad. We cannot employ this bass in minor, not having as yet learned the treatment of the subordinate triads II and III.

143.



The **Cadence** (No. 58) may be extended by interpolating the subordinate triad VI as second chord, between tonic and sub-dominant. **Play it, in this form, in major and minor.**

Exercise 12.

Harmonize the following melodies and basses in four parts, using the fundamental form of the subordinate triads.

In harmonizing the basses, a good leading of the soprano should chiefly be kept in view.

Soprano given. Model 12.

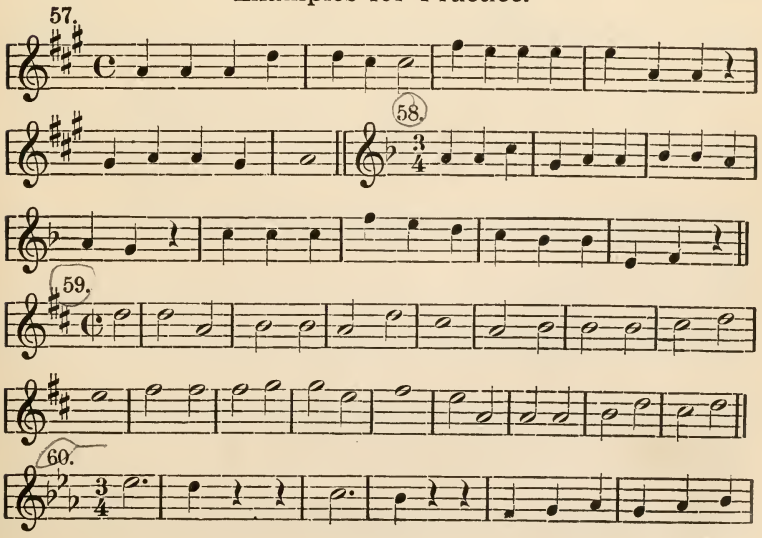


Bass given.

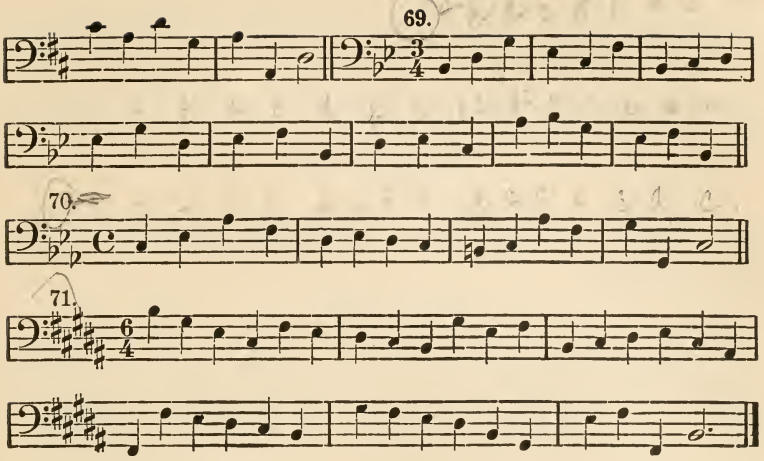




Examples for Practice.




61.
62.
63.
64.
65.
66.
67.
68.



§ 24.

INVERSIONS OF THE SUBORDINATE TRIADS.

In employing the chords of the sixth derived from subordinate triads, the pupil should at present restrict himself to those uses justified by the relationship of the keys or by the degreewise progression of the bass :

144.



The employment of $\frac{6}{4}$ chords derived from such triads must be strictly regulated by the rules given in § 13.

145.



The immediate succession of two chords of the fourth and sixth is in no case admissible.

For the employment of inversions, the requirement of common tones, of course, still holds good.

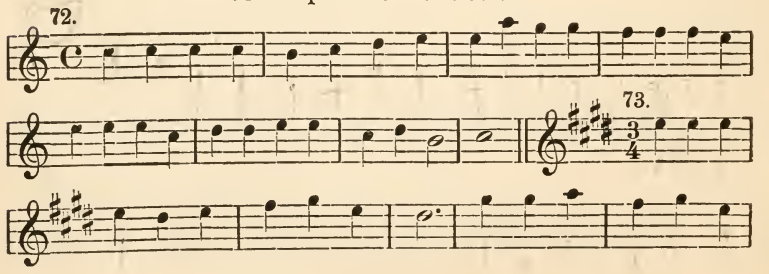
Exercise 13.

Work out, with these inversions, the following examples for practice, and also some of the melodies given in the last Exercises.

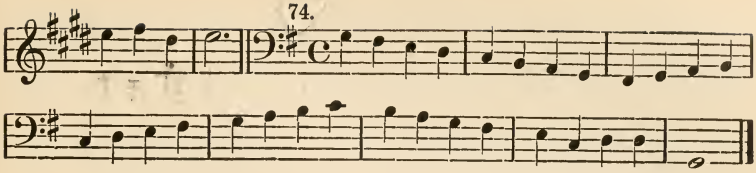
Model 13.



Examples for Practice.



74.



§ 25.

SUBORDINATE TRIAD ON THE SECOND DEGREE IN MAJOR AND MINOR.

The triad on the second in major still requires special consideration. It may enter, as a substitute for the sub-dominant, in full closes, half-closes, and similar leadings, when the leading of the melody or parts offers opportunity (No. 142).

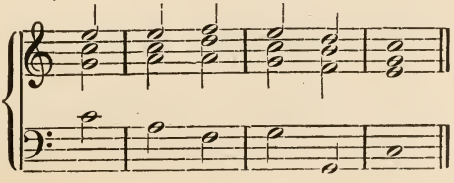
146.



In such cases, its chord of the sixth (the first inversion having the sub-dominant of the key as bass) is far more frequently employed than the fundamental chord.

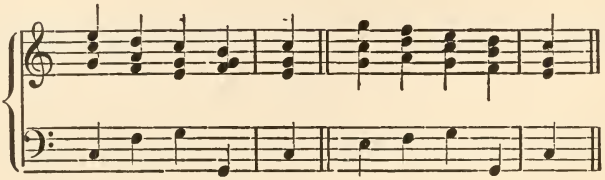
This preponderance of the chord of the sixth results from the development of our musical system, in which this chord is evolved from the sub-dominant as a chord of the sixth based on the latter. For this reason, the bass may be doubled without hesitation, although the third of the fundamental chord; thus in a cadence, as a substitute for the sub-dominant chord:

147.



In this capacity it may follow the tonic triad directly, although possessing no tone in common with the same.

148.



The diminished triad on the second degree in minor may be treated in a precisely similar manner, excepting that its fundamental chord occurs less often than that of the minor subordinate triad on the second in major. Still, the fundamental position is not excluded, but quite justifiable when brought about by a good leading of the parts:

149.



The fundamental chord II may likewise follow, but not precede, the sub-dominant triad in the cadence:

150.



Form cadences with this chord in all major and minor keys.

The $\frac{6}{4}$ chord derived from the triad on the second, though occurring exceptionally in like capacity, is here excluded by the prohibition of successive chords of the fourth-and-sixth.

As the diminished subordinate triad on the II in minor is not, like the dissonant principal chord VII, limited to one resolution, it can progress to a dissonant principal chord other than the dominant chord.

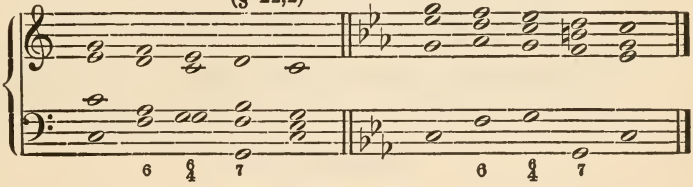
151.



For the harmony of the *descending* scale in major and minor the following smoother close results from a degreewise progression.

(§ 22,2)

152.

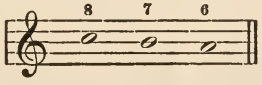


§ 26.

SUBORDINATE TRIAD ON THE THIRD DEGREE IN MAJOR.

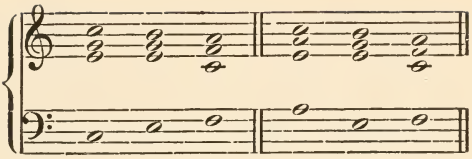
The subordinate triad on the third degree in major is employed in a peculiar manner as harmonic basis to the descending seventh of the major scale:

153.



immediately preceding the sub-dominant triad, although not connected with the latter by common tones.

154.



Its *first* inversion may be treated similarly, but only where the bass progresses by steps.

155.



The scale-progression may also be shifted to an inner part.

156.



Play descending major scales with these progressions.

Exercise 14.

The following examples afford opportunity for employing what has been learned in the two last §§.

Model 14.

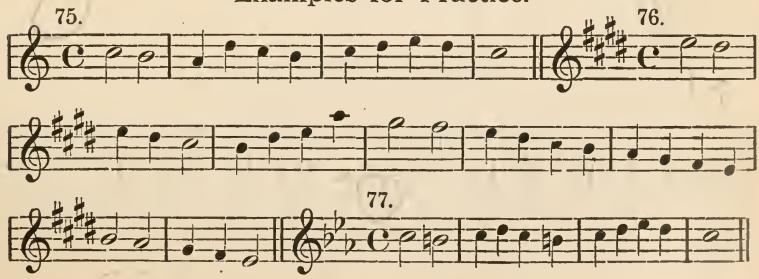




Poco allegro.



Examples for Practice.





§ 27.

OTHER FREE LEADINGS OF THE SUBORDINATE TRIADS.

As the subordinate triads, though without contradicting it, do not express their close relation to the key so distinctly as the principal chords, they may enter into some further combinations with these latter, even without common tones, which are justified by the leading of the parts, and often occur.

Where the dominant triad follows the subordinate triad II, the latter must be followed by the tonic triad. (P. 67, No. 142).

157.



Here the interpolation of the subordinate triad III between dominant and tonic is, however, permitted under the condition that its fifth, having been the leading-note before, shall progress to the tonic by a step upward.

158.



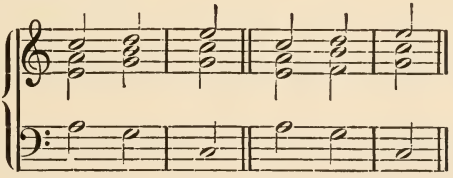
In the progression VI—III—IV (Nos. 154—5) the leading I—V—VI is allowed in major, when the higher parts progress by steps ; but *not* in minor, on account of the augmented second.

159.



The progression VI—V also occurs in major under like conditions, when the higher parts progress in contrary motion, in which case, too, the chord of the seventh may be substituted for the dominant triad.

160.



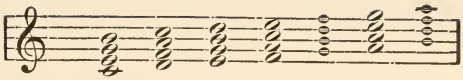
Cautious use may be made by the pupil of these free leadings in the examples for practice under the next Exercise.

§ 28.

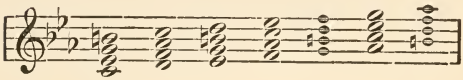
SUBORDINATE CHORD OF THE SEVENTH ON THE SECOND DEGREE.

By forming chords of the seventh on all degrees of the scale we obtain, besides the two principal chords, five subordinate chords of the seventh :

II



161. II



of which we already employ *one* (that on the second) in our exercises, leaving the others for later instruction. (§ 67.)

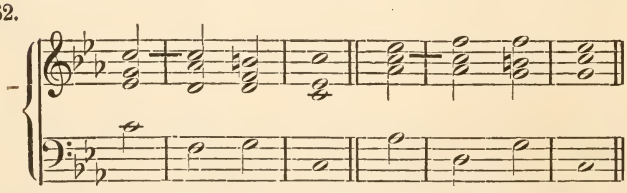
The subordinate chord of the seventh on the second degree in *major* has a minor third, *perfect* fifth, and minor seventh; in *minor*, a minor third, *diminished* fifth, and minor seventh. Like the subordinate triad on the second, it occurs as a substitute for the sub-dominant triad in cadence and similar leadings, and likewise, by preference, in the first inversion.

Its seventh, the key-note of the scale, must be prepared, i. e: must be already present in the preceding chord in the same part.

Introduction of the subordinate chord of the seventh.



162.



But it suffices, when such preparation is incompatible with the requirements of the melody and a good leading of the parts, if the seventh is simply present in the preceding chord:

163.



In its progression to the dominant chord, the seventh of the subordinate chord of the seventh must progress by a step downward into the third of the dominant chord.

Resolution of the subordinate chord of the seventh

164.



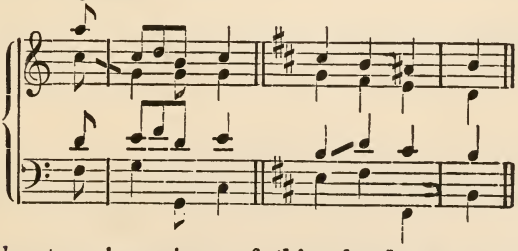
In the progression to the $\frac{6}{4}$ chord, the seventh is sustained in the same part.

165.



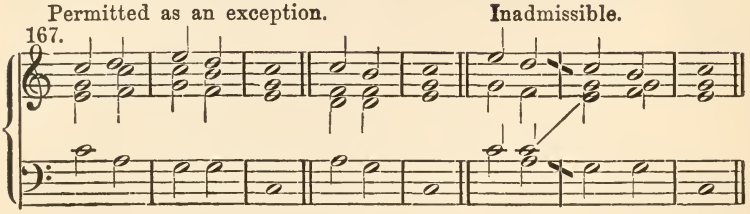
But when the leading of the parts is otherwise good, this rule may be slighted.

166.



Of the two inversions of this chord not yet mentioned, the chord of the third-and-fourth may be admitted occasionally,

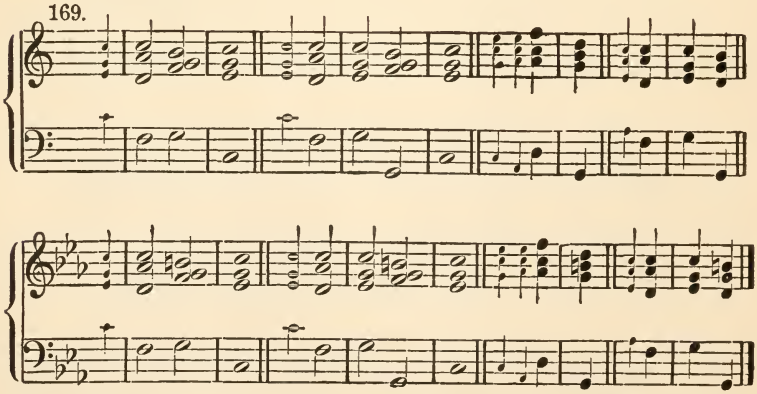
where no parallel fourths between the bass and another part result therefrom:



but the chord of the second *only* when it resolves directly and quite regularly (bass a semitone downward) to the dissonant principal chord ; e. g. : to the $\frac{6}{5}$ chord derived from the dominant chord of the seventh:

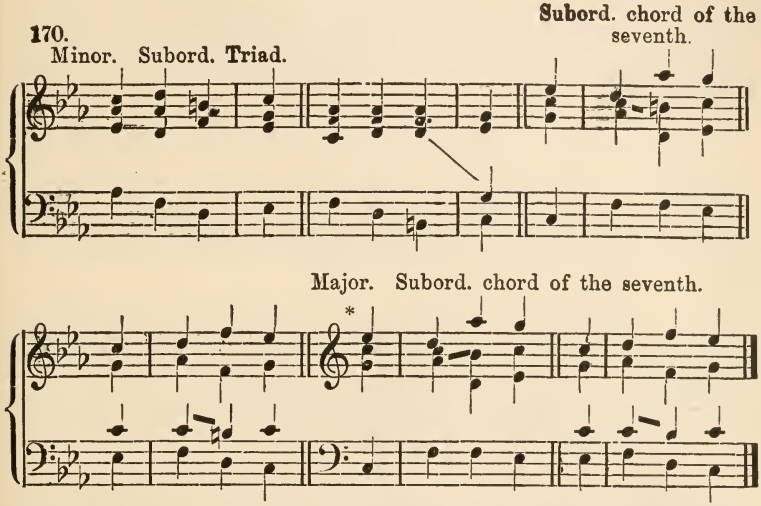


Form full and half-closes with the subordinate chord of the seventh, with various positions of the higher parts, in all major and minor keys.



Like the subordinate triad on the second, the subordinate chord of the seventh in major and minor may also progress to other dissonant principal chords besides the dominant chord, the seventh of the subordinate chord of the seventh then *always resolving downward by a degree.*

170.



The chord of the second derived from the subordinate chord of the seventh may also make the same movement.

171.



Exercise 15.

Work out the following melodies, employing all chords thus far learned; the first six with special consideration of the subordinate chord of the seventh.

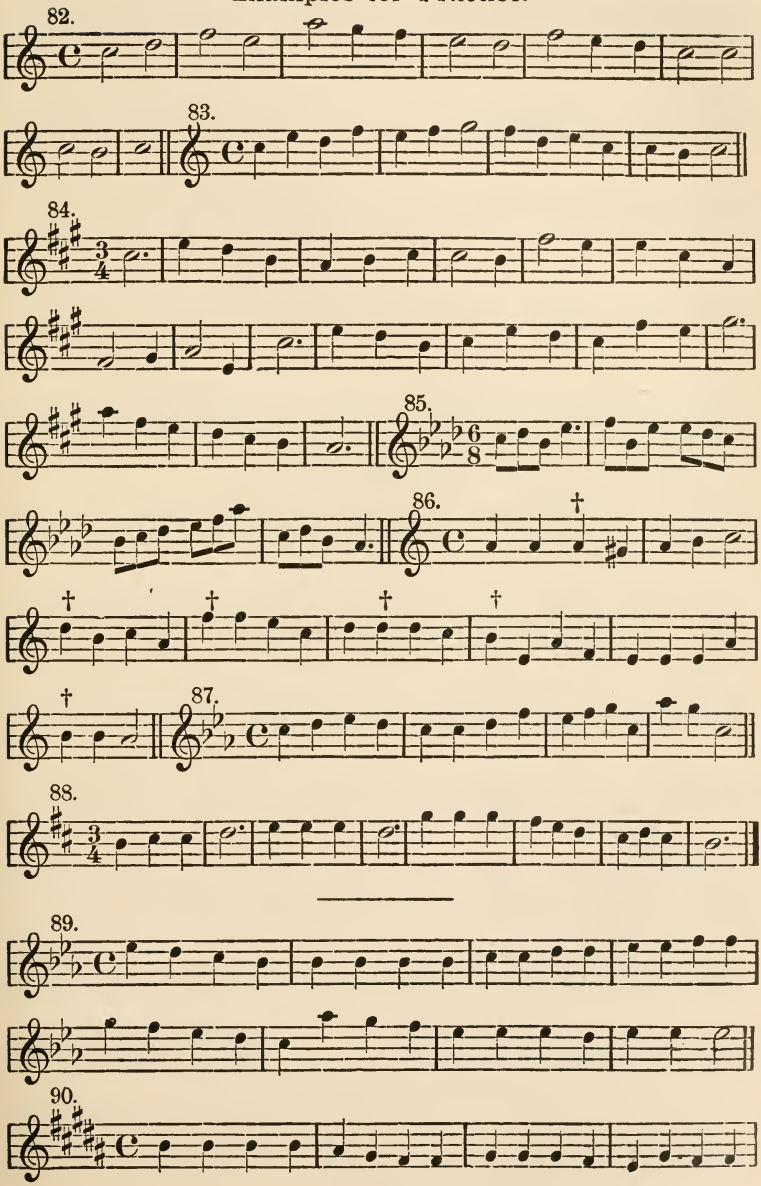
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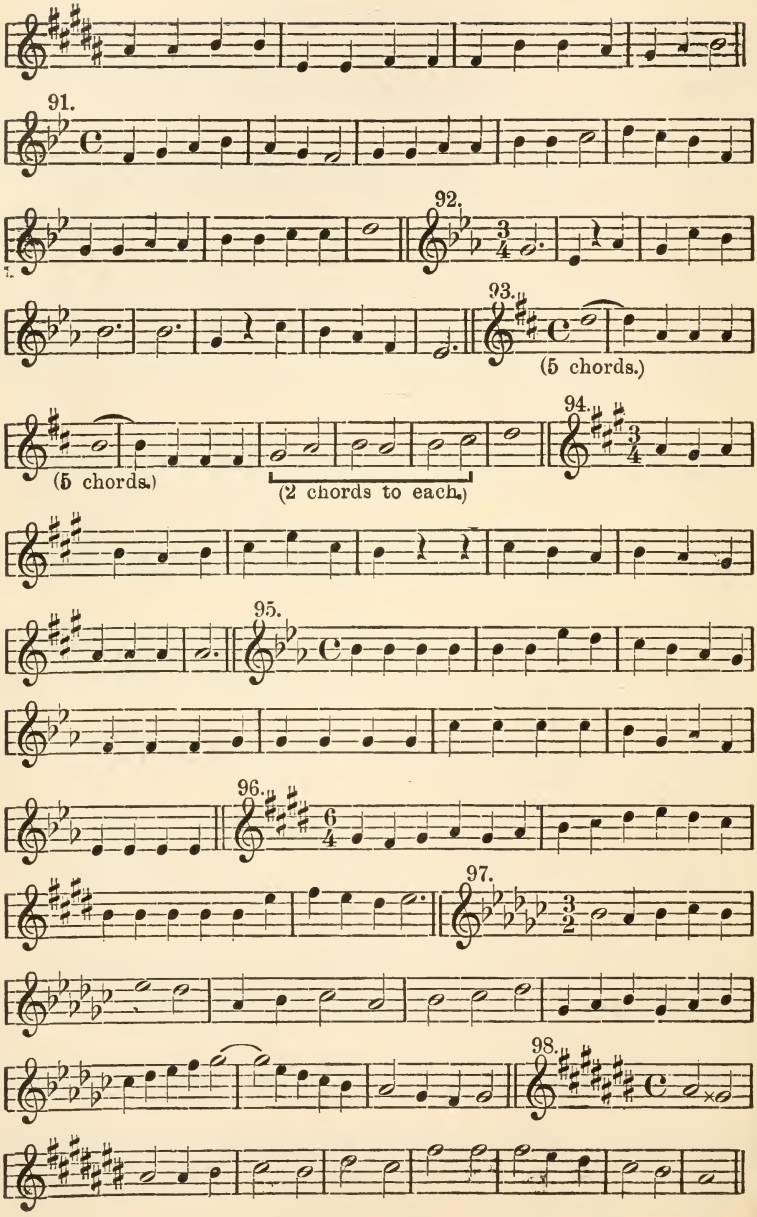
* In the explanatory examples, new clefs annul the preceding signature without express cancellation.

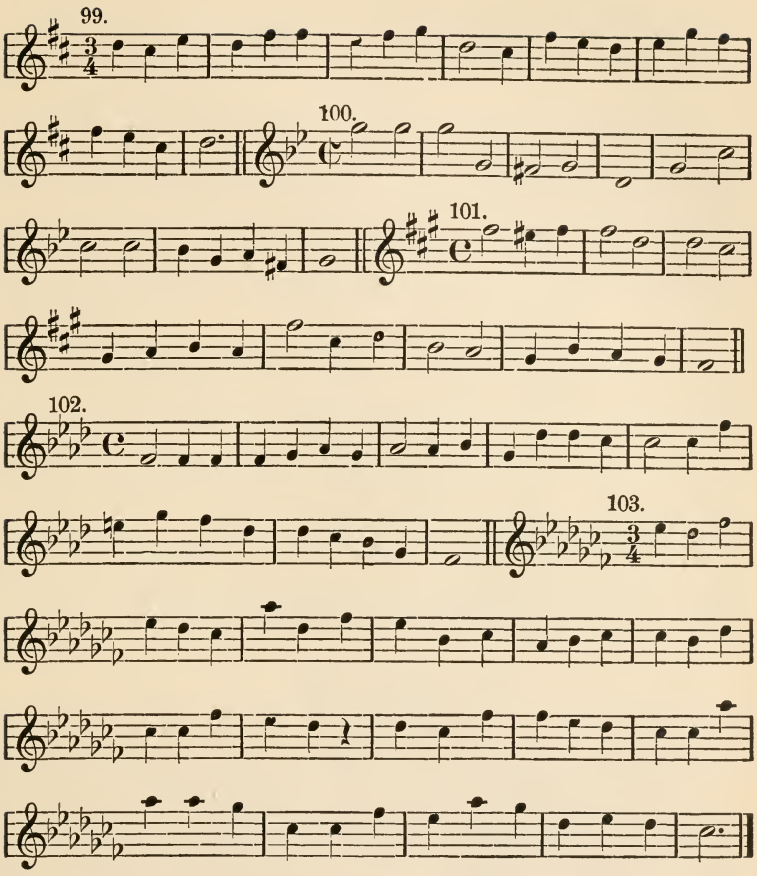
Model 15.



Examples for Practice.




91.
92.
93.
(5 chords.)
(5 chords.)
(2 chords to each.)
94.
95.
96.
97.
98.



The pupil is now already capable of harmonizing in four parts any folk-songs which do not modulate, and many *chorales* (hymn-tunes, sacred choral songs), the melodies of which will be found in any Book of Chorales (that compiled by Erk is very useful and reliable).

Thorough-bass Notation.

§ 29.

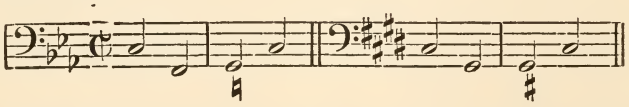
The indication by figures of intervals, the so-called thorough-bass notation, employed as a sort of short-hand for determining the chords, was formerly in very general use in practical music, but is now falling into disuse. It is, however, of too great importance for the composer to be altogether passed over here. Through this figure-notation, the intervals which the higher chord-tones form with the bass are indicated by figures over or under the bass part. This renders it possible to play, from such a figured bass, a correct accompaniment on the organ or piano. For the composer they serve to indicate a chord in a rapid sketch without having to fill out the notes at once in all parts. The rules for such notation, as far as they concern the chords already mastered, are the following:

Every chromatic sign refers to that interval, reckoned rom the bass note, before whose figure it stands; **e. g.,** the sharp to the sixth, which is consequently c♯:

172. 

A chromatic sign *standing alone* always refers to the *third.*

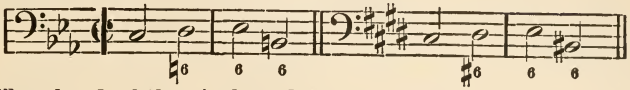
A *triad,* whether major, minor, or diminished, is not figured at all. But if its third be raised in relation to the signature (like that of the dominant triad in minor), the chromatic sign which would indicate such a raising is written over or under the bass note.

173. 

In the first example the third is indicated by a natural, because the third of the major dominant triad is *b,* not *b♭;* in the second example by a ♯, because the third is *b♯,* not *b.*

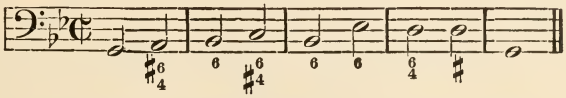
The chord of the sixth is indicated by **a 6.** Where the sixth is raised as compared with the signature, the corresponding chromatic sign is set before the 6.

174.



The chord of the sixth-and-fourth is indicated by $\frac{6}{4}$. Where either of these two intervals contradicts the signature, the corresponding chromatic sign is placed before the figure indicating the interval.

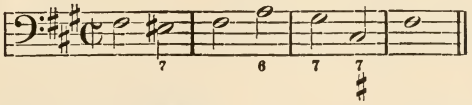
175.



Chords of the seventh, whether dominant, minor, diminished, or subordinate, are indicated by a 7.

The raised *third* of the dominant chord in minor is indicated by the corresponding chromatic sign *under* the 7.

176.

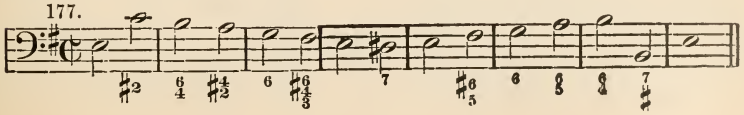


The chord of the *(third)*, *fifth* and *sixth* (first inversion of chord of the seventh) is indicated by $\frac{6}{5}$. Any chromatic sign required is placed before the figure for the interval altered. (In our present exercises this concerns the 6 only).

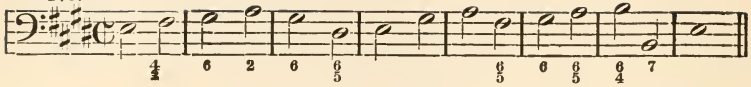
The chord of the *third* and *fourth* (and *sixth*) is indicated by $\frac{4}{3}$. When the chromatic sign refers to the *sixth*, this latter must be added in the notation, and the chromatic sign required placed before it; e. g.: $\frac{6}{4}$.

The chord of the *second* (*fourth* and *sixth*) is indicated by a 2. Chromatic signs as above. Should a chromatic sign refer to the fourth, its figure, 4, must be added, with the sign needed; e. g.: $\frac{4}{2}$.

177.

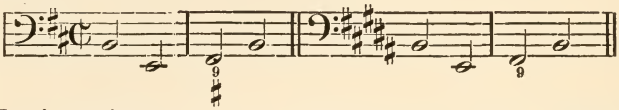


178.



The chord of the *ninth* is indicated by a 9. A chromatic sign standing alone under the same refers, as elsewhere, to the third.

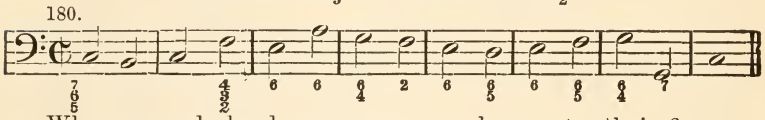
179.



Its inversions are to be indicated by their characteristic intervals:

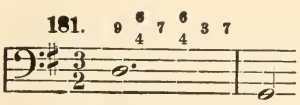
the first by $\frac{7}{6}$, the third by $\frac{4}{3}$.

180.



Where several chords occur over one bass note, their figures should be set as nearly as possible in the places which the chords would occupy in the measure. In such cases, triads are also figured, and indicated by a 3.

181.

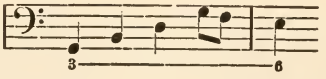


equals:



Where we wish to show that the higher parts hold the same chord during several notes in the bass, we draw a line from the last valid figure, its length determining the duration of that chord.

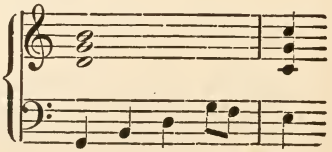
182.



equals:



or:



As to the position of the soprano, the figuring indicates nothing; it is, therefore, left to the insight already gained by the pupil.

Model 16.



Exercise 16.

The following figured basses are to be harmonized in four parts, with good vocal leading of soprano, each in several keys. Then play them in four parts, without using the exercises already written. Finally, the basses of some of the examples for practice before worked out (72 to 103) are to be figured.

Examples for Practice. (Basses.)

104.



105.



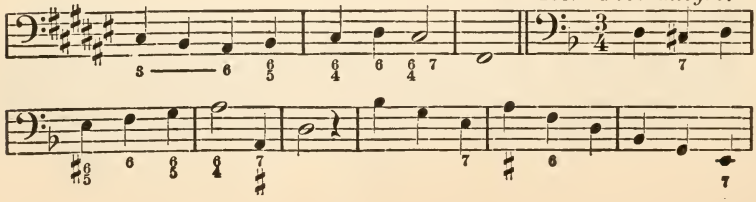
106.



107.



108. *Poco allegro.*





Herewith are ended the exercises of the first, fundamental, and, therefore, most important part of the harmony course and the full course in composition. No one should proceed to the next-following part, who has not attained complete mastery over the material of the first.

II. The Tones Foreign to a Harmony.

§ 30.

INTRODUCTION.

In nearly all exercises hitherto worked out, the pupil was obliged to use a separate chord to each tone of the melody. Such treatment would cause more lively movements to appear heavy and overladen, and the exercises in the first part cannot be considered free from this fault, although the melodies there given were calculated so far as might be for this style of harmonizing. We shall now proceed to learn the conditions, under which the accompanying parts are released from the necessity of following the melody throughout its progressions, and the movement becomes lighter through a limitation in the number of the chords.

For, under these conditions, tones *foreign* (not belonging) to a chord may, nevertheless, combine with the same.

Such tones are named, *tones foreign to the harmony.* According to the various conditions for their entrance they are grouped in four chief classes: 1. Passing-notes, 2. Suspensions, 3. Anticipations, 4. Changing-notes.

Passing-notes.

§ 31.

SIMPLE PASSING-NOTES IN ONE PART.

A tone on a relatively weak beat, progressing by a degree between two harmonic tones (i. e. : tones belonging to a chord — chord-tones), is called a *Passing-note.*

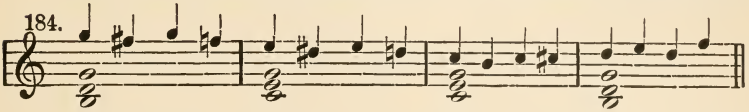
183.



The degreewise progression may be diatonic or chromatic, but the pupil must employ the latter very cautiously.

Here the chromatic signs have no influence on the key.

184.



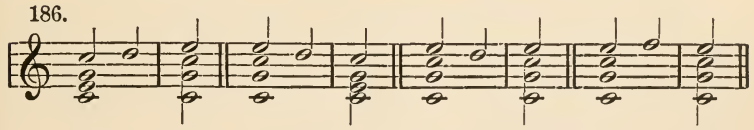
In triple (ternary) time the passing-note may occur on the second or third beat or subdivision, i. e.: not necessarily between two strong beats.

185.



The progression is directed either *upward*, or *downward*, or *backward* (i. e.: leading back to the preceding tone).

186.



The first two progressions usually require in minor, with the corresponding leadings, the melodic form of the scale. (Elements of Harmony and Notation, §§ 45, 46).

187.



Faulty progressions of chord-tones are *not* neutralized by passing-notes

188. a equals b equals



By the passing-note *f* (fourth) the parallel fifths at **a** are not neutralized, because the intervals on the strong beat impress themselves on the ear as essential, and the ill effect of the parallel fifths on the strong beats remains quite as sensible as without the passing-note. The same is true of the parallel octaves at **b.** Single passing-notes on weak beats cannot form false progressions.

189.



Preparatory Piano-exercise. Strike chords with the left hand, and play to them with the right hand a part containing passing-notes. Play cadences with passing-notes in the bass; first with two, secondly with three, thirdly with four notes in the bass.

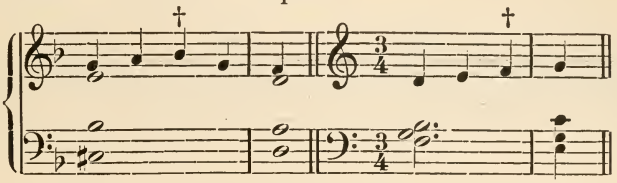
Exercise 17.

Given, an harmonic movement in the form of a figured bass. (1) The soprano of same is to be changed to a continuous flow of quarter-notes, and wherever possible by means of interpolated passing-notes. Bass remains unchanged; the other parts sustain the given harmony. (2) Now treat the alto as the soprano was treated. Bass unchanged; soprano and tenor sustain harmony. (3) Tenor like alto above. Bass unchanged; soprano and alto sustain harmony. (4) The bass itself is to be changed to a flow of quarter-notes. The other parts sustain harmony.

Each of these exercises should be written out several times to one harmonic foundation. First write out the bass part; then the part in quarter-notes, with regard to its own position and to that of the parts still left out, and to the given harmony.

The employment of passing-notes, and of other foreign tones to be treated of later, sometimes necessitates a doubling of even those dissonant intervals, whose doubling was hitherto not allowed. In these examples:

190



the seventh in the chord of the seventh may properly be doubled in passing (provided that the foregoing movement in the parts was similar, and in order not to interrupt the same), because the further leading of the soprano insures us against false harmonic progressions. On the contrary, such a doubling would be blamable in the following example:

191.



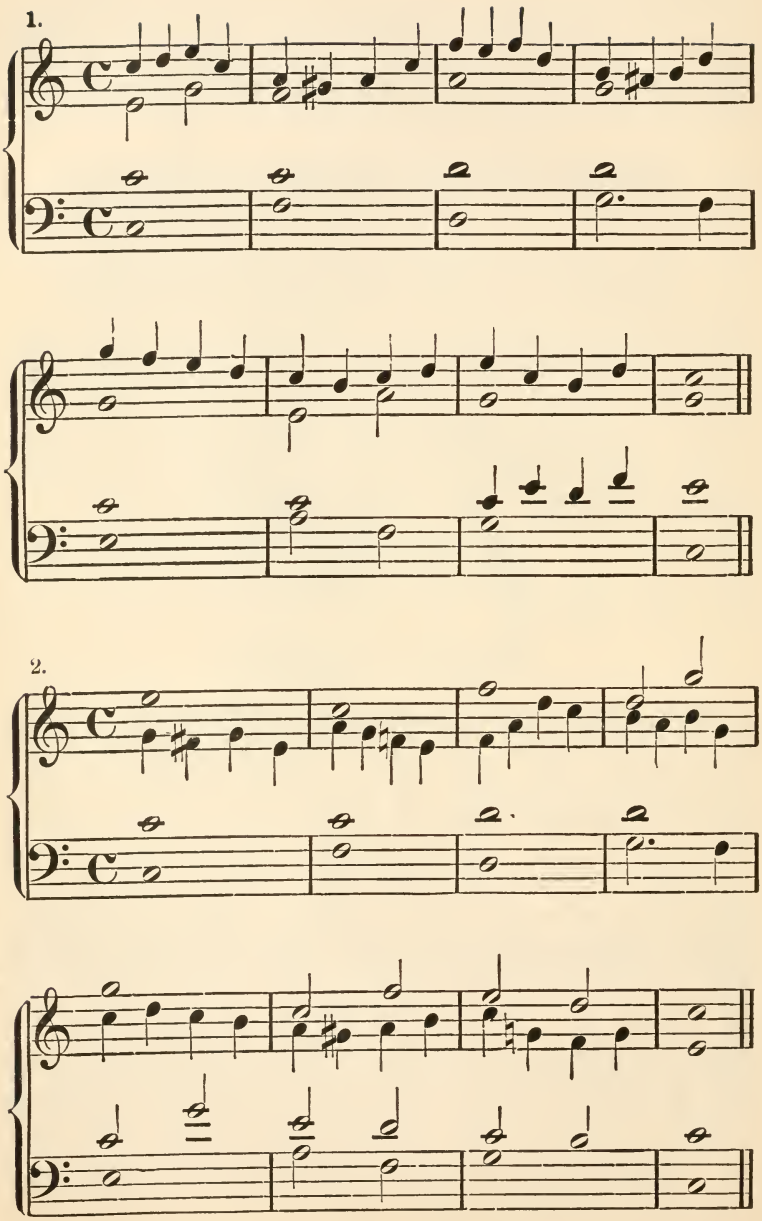
For here the strong beats show parallel octaves between soprano and tenor, and the minor third interpolated on the weak beat in the soprano is not prominent enough to neutralize the effect of these octaves.*

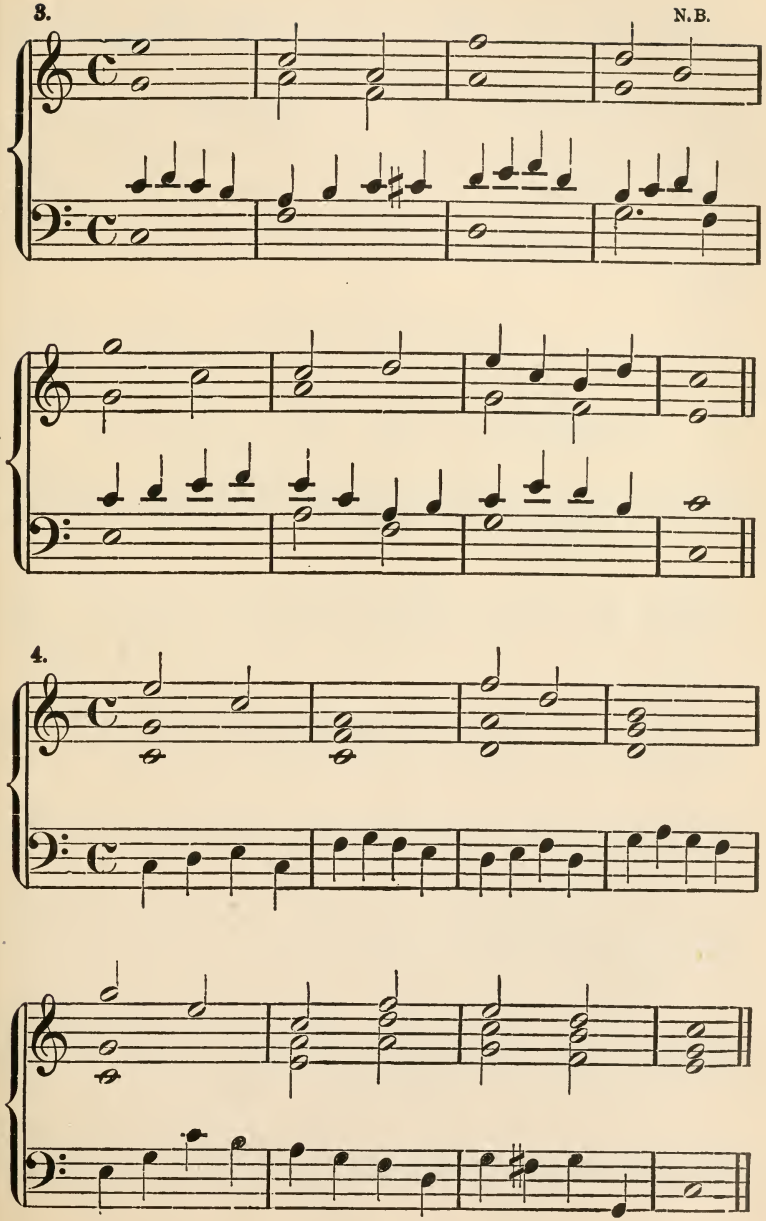
Model 17.

Given.



* Respecting manner of writing the half-notes compare *Elements of Harmony and Notation*, § 33.


1.
2.

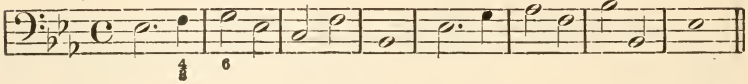

3.
N.B.
4.

N. B. Here the third of the dominant chord could be doubled in passing, (1) because parallel octaves neither result therefrom nor can even be presupposed, for the skipping progression of the soprano is required by its leading in the very first four measures; (2) because the weak beat, together with the smooth leading of both the lower parts, while the higher parts are sustained, prevent the doubling from being prominent; (3) because any other leading of the parts would be more awkward.

Examples for Practice.

The inner parts are not bound to the rhythm of the bass. As a substitute for an indicated chord, some other chord may occasionally be taken, that can fill its place.

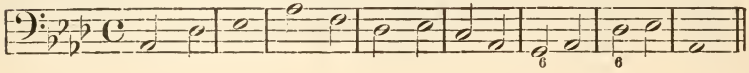
112.



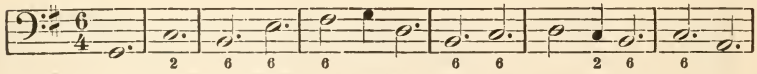
113.



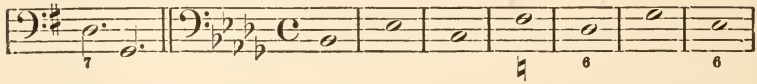
114.



115.



116.



117.



Harmonize the following melodies, containing passing-notes, in four parts.

Model 17 a.



Examples for Practice.





§ 32.

SIMPLE PASSING-NOTES IN SEVERAL PARTS.

Passing-notes may also enter simultaneously in two parts, provided that they cause no faulty, ill-sounding, or unnatural progressions or harmonies ; whence it follows, that their progression in thirds and sixths is preferable :



Occasion may sometimes offer for writing three simultaneous passing-notes. And in general it is possible, in polyphonic writing, to admit a number of simultaneous passing-notes less by one than the entire number of parts. (Model 18, measures 7 and 15).

Exercise 18.

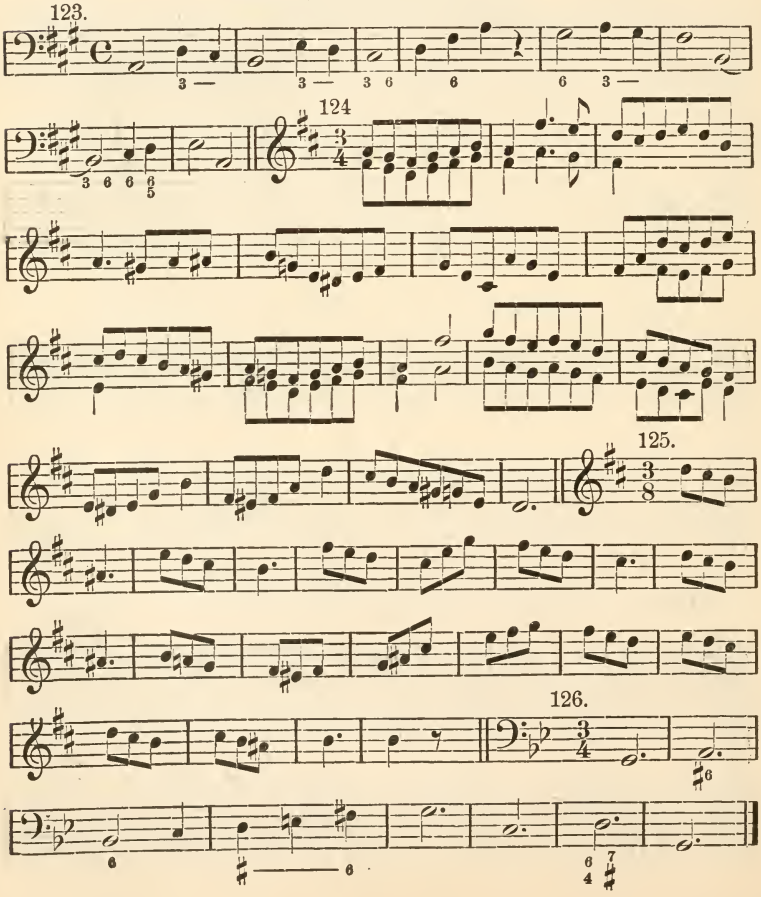
Work out the following basses and sopranos in four parts, employing practically the suggestions in this §.

Melody given. Model 18.





Examples for Practice.



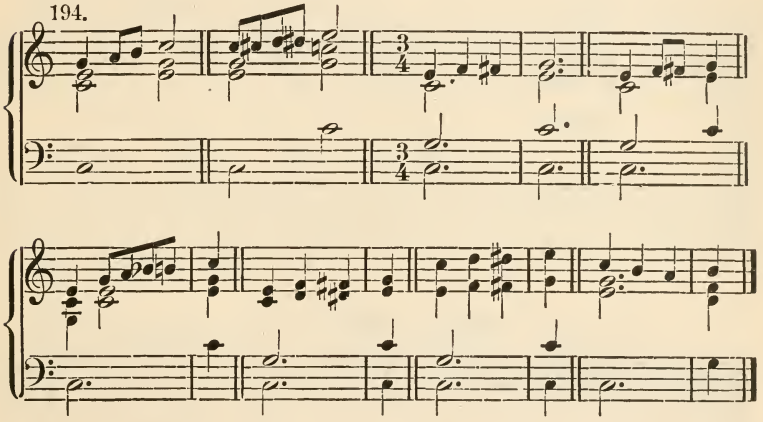
§ 33.

COMPLEX PASSING-NOTES.

Two or more foreign tones progressing by degrees may likewise occur, on relatively weak beats, between two chord-tones, and thus form double or complex passing-notes.

In triple time, such passing-notes may also occur between the first and third, or between the second and (the following) first beats or subdivisions of the measure. (§ 31, No. 185.)

194.



Exercise 19.

Work out the following melodies, containing such passing-notes, in four parts.

Model 19.



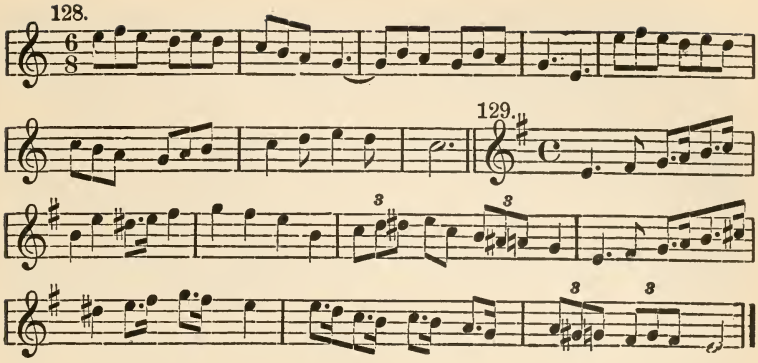


Examples for Practice.

127.



128.



129.

§ 34.

PASSING-NOTES ON WEAK BEATS. INCORRECT CHANGING-NOTES

Tones which fulfil all other conditions of passing-notes, but occur on a strong beat, are reckoned as passing-notes, and treated as such.

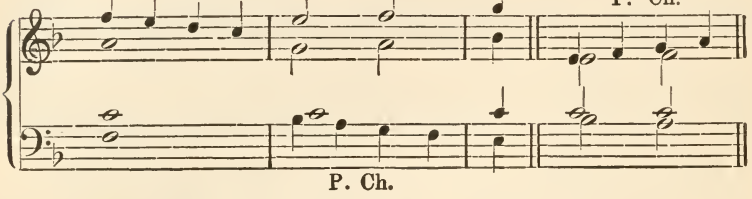
195.



As they exchange the weak for the strong beat, they are sometimes called changing-notes, but improperly so, because the original sense of this term has reference to an alternation between a consonance and a dissonance. Properly speaking, they are suspensions introduced by a degree.

The tone preceding such a changing-note is either a chord-tone, or a common passing-note; in the latter case, therefore, we have a passing-note and a changing-note in succession.

196. P. Ch. P. Ch.



P. Ch.

In cases evidently originating with double passing-notes the changing-note may be followed degreewise by a passing-note. E.g.:

197.



is admissible, because it can be shown to originate with a regular double passing-note (§ 33).

198.



The entrance of such tones is restricted solely by the rule, that they must not form, with the tone to which they progress, the *second* of the same octave. Consequently, the following leadings are strictly regular.

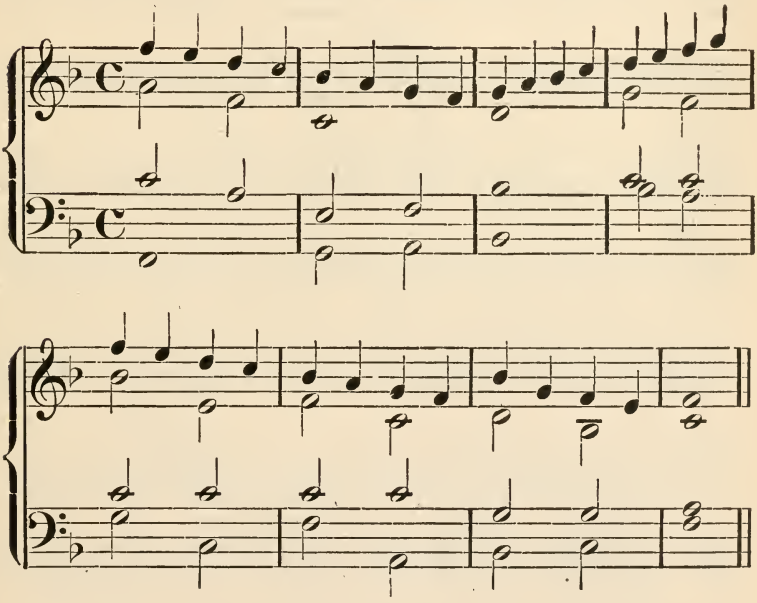
199.



Exercise 20.

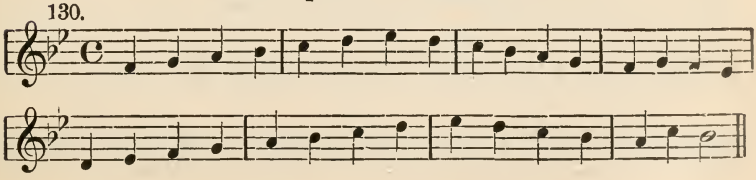
Work out the following examples for practice in four parts, in such a form that the added parts shall, in general, progress in notes of greater value than those of the given part. E. g.: when the latter is in eighth-notes, write the others in quarters, halves, or even whole notes ; if in quarter-notes, take half and whole notes ; in triple time, dotted notes of greater value may be employed.

Model **20.**



Examples for Practice.

130.




131.
132.
133.
134.
I
VI
II
V
I
V
I
VI
II
V
I
II
V
I
135.
136.

137.



The Suspensions.

§ 35.

TIED SUSPENSIONS.

The Suspension (suspended tone) occupies a relatively strong beat or subdivision, and resolves to a chord-tone on a relatively weak beat or subdivision, the chord itself being held unchanged in the other parts. A *tied suspension* is a tone which was a chord-tone in the chord immediately preceding, and in the same part. In triple time the second beat (or subdivision) is considered as strong in comparison as the third (comp. chord of the $\frac{6}{4}$, § 13).

200.

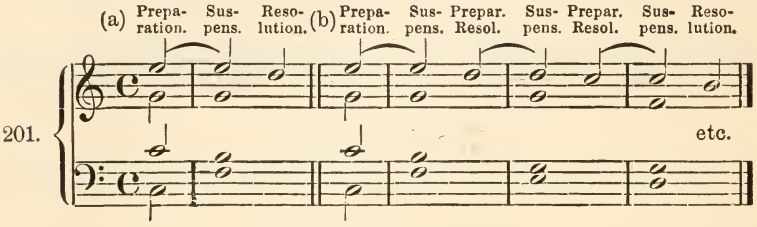


For the treatment of tied suspensions, three rules have, therefore, to be observed :

(1) The entrance of the tone, later suspended, as a chord-tone in the preceding chord — the *preparation;*

(2) The *suspension* itself, which forms a dissonance with the accompanying chord;

(3) The *resolution*, by a step downward, to the chord-tone.



At *(a)* are exhibited the three elements of a tied suspension; at *(b)* a succession of suspensions, wherein the resolution of the one serves also as a preparation of the next.

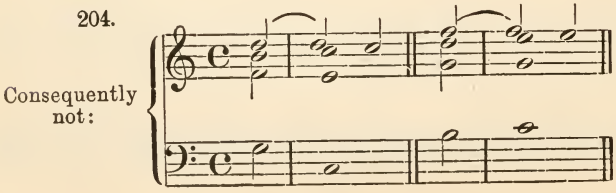
For the relation in which the preparation stands to the suspension, observe the

RULE: The preparation must not be effected by a note of shorter value than the suspended tone ; i. e.: a long note must not be tied to a shorter one. E. g.:



For the relation of the suspension to the accompanying chord, observe the

RULE: The suspension, and the chord-tone to which it must be resolved, *must not meet each other,* in the same octave and different parts, *in the interval of a second.*



A meeting of the suspension, and the chord-tone to which it resolves, *in the unison, even in different octaves,* should, when feasible, be avoided; i. e.: where neither the leading of the parts nor the fullness of the harmony suffers thereby. For instance, we should avoid:

203.



and give preference **to:**



Similar cases may, however, appear quite justifiable in consideration of good leading or full harmony, and are best introduced by contrary motion; **e. g.:**

204.



But the *leading-note* (seventh of the key, appearing as such as *third* in the chords of the dominant and ninth, and as *fundamental* in the diminished triad, and minor and diminished chord of the seventh) *must never, while entering in one part, be retarded by suspension in another.*

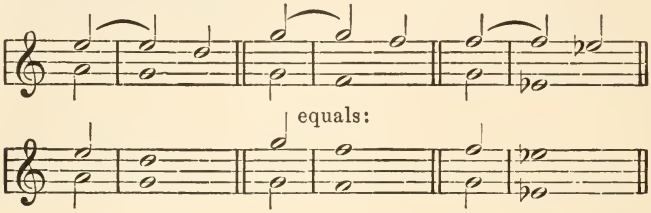
205.

Never:



False progressions are not neutralized by suspensions, although the suspension is far more prominent than the passing-note. With suspensions, parallel fifths and octaves on weak beats must be avoided.

206.



At first, we shall employ the suspension only in the soprano, as its entrance in the bass or inner parts necessitates modifications of the directions given.

Exercise 21.

Work out the following figured basses in four parts, with as numerous suspensions in soprano as possible.

The figuring refers only to the chords, not to the suspensions.

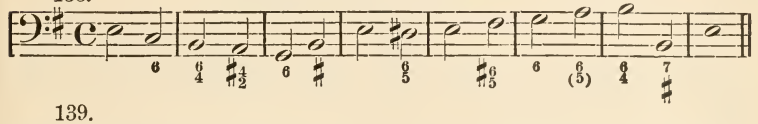
Model 21.



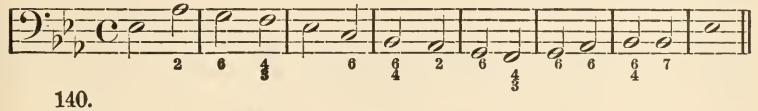


Examples for Practice.

138.



139.



140.



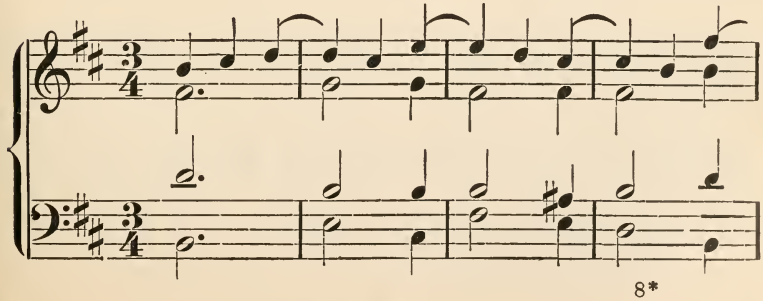
141.



Exercise 22.

Work out the following melodies, containing tied suspensions, in four parts, but without suspensions in the lower parts.

Model 8.





Examples for Practice.



* Here the suspension falls on the dot.

** Suspension on second beat.

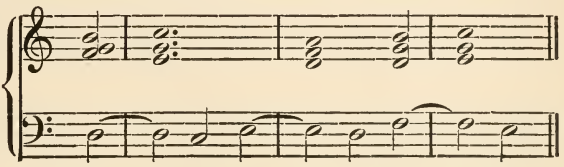
§ 36.

TIED SUSPENSIONS IN BASS.

For suspensions in the bass, the rule concerning the relation of suspension to harmony (given in preceding §) holds good unconditionally; i. e.: the suspension, and the chord-tone to which it resolves, must not meet in unison, either in the same octave or in different ones. Thus the following cases are

207.

inadmissible:



Exercise 23.

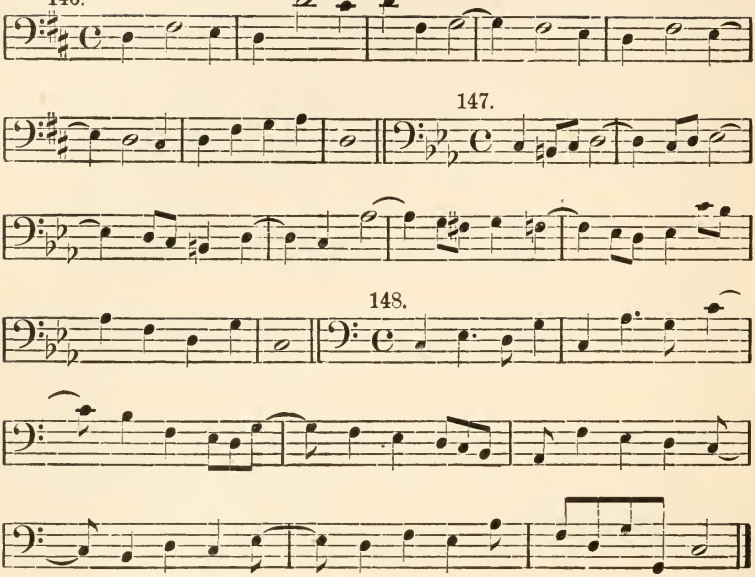
Write the higher parts to the following basses containing suspensions.

Model 23.



Examples for Practice.

146.



§ 37.

TIED SUSPENSIONS IN INNER PARTS.

Suspensions in an inner part stand in like relation to each *higher* part as does the suspension in the bass; to each *lower* part, as the suspension in soprano. Thus, if a suspension enter in an inner part, a meeting of the same with that chord-tone, to which it resolves, is permitted in a different octave when the suspension lies above said chord-tone; as here:

208.

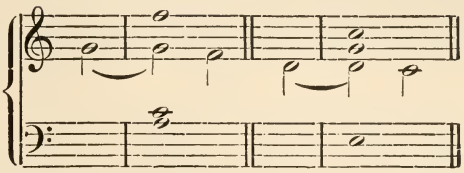
Correct:



But such a meeting is inadmissible, when the suspension lies below the chord-tone to which it resolves, as here:

209.

Incorrect:



The rule concerning the relation of the tied suspension to the chord-tone, therefore, can be stated in more general terms:

An anticipation of the suspension by the chord-tone, to which it resolves, in the *second* of *the same octave, is always inadmissible.* Such a meeting in *different octaves* is admissible when the suspension lies in a higher part; and inadmissible when it lies in a lower part.

Exercise 24.

Work out the following melodies and basses with regularly tied suspensions brought in, now in one, and now in another, of the added parts. Where a suspension is impracticable, try at least to make up for it by a tied *(syncopated)* note.

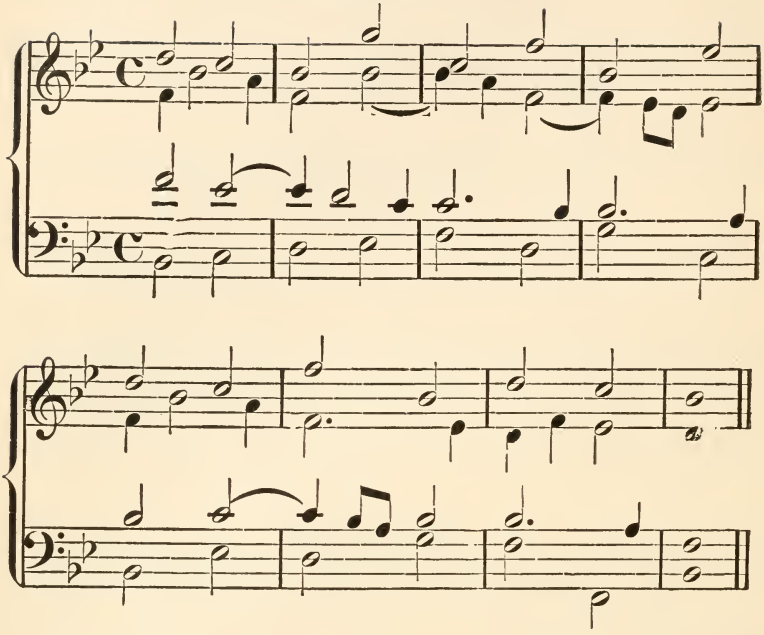
210.



In any case see to it, that the movement is kept up on the weak beats; because a sudden halt for the length of a half-measure would have the effect of a break.

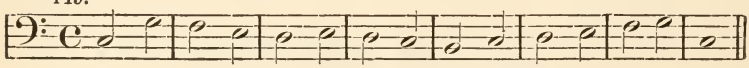


Model 24.

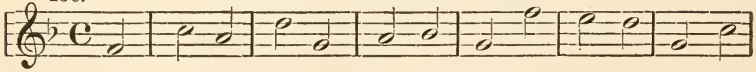


Examples for Practice.

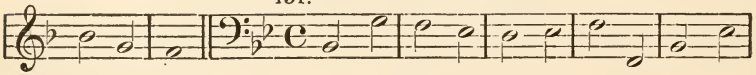
149.



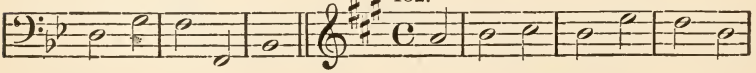
150.



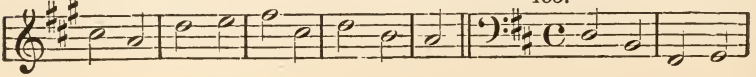
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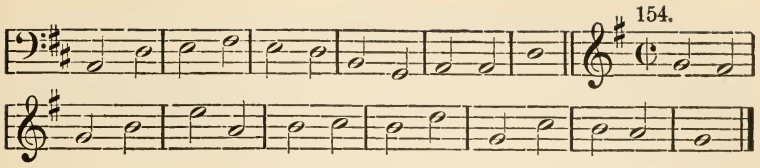


152.



153.





§ 38.

SUSPENSIONS IN TWO PARTS.

Simultaneous suspensions in two parts are prepared and resolved like simple ones.

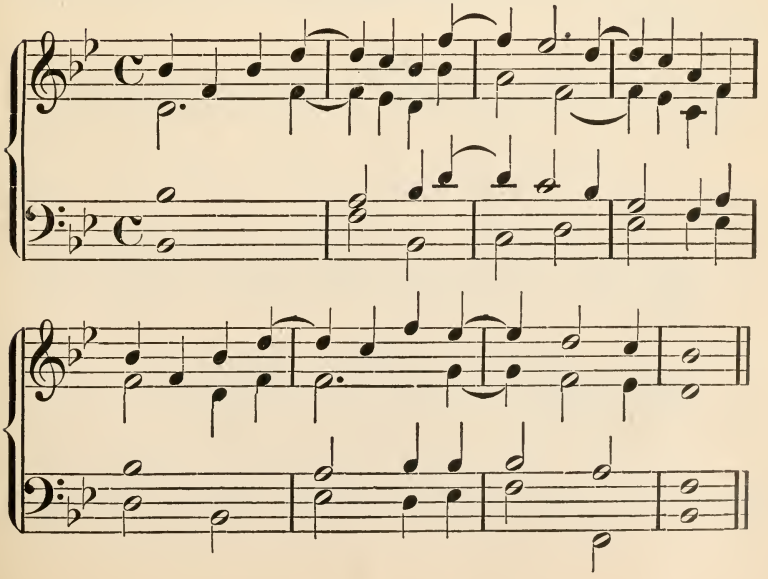
211.



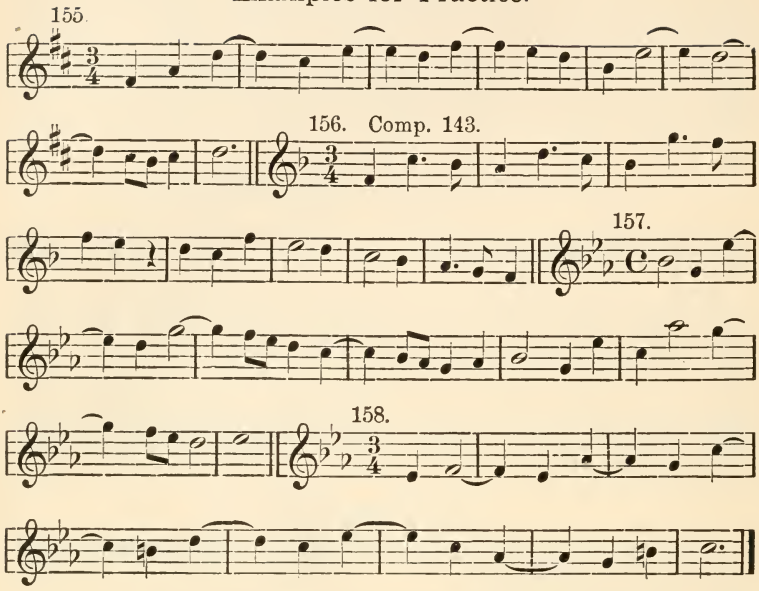
Exercise 25.

Work out the following melodies in four parts, employing two-part suspensions.

Model 25.



Examples for Practice.



Harmonize descending major scales, and cadences, with suspensions.

§ 39.

RETARDED RESOLUTION OF TIED SUSPENSIONS.

The regular resolution of a suspension may be retarded by an interpolated tone belonging to the accompanying chord.



The skip of a fifth downward (*a*) exhibits much the commonest form of this retardation, through which, as may be seen here, the tying of a long note to a shorter one is avoided.

The interpolated tone may also enter by a skip upward.

213.



Exercise 26.

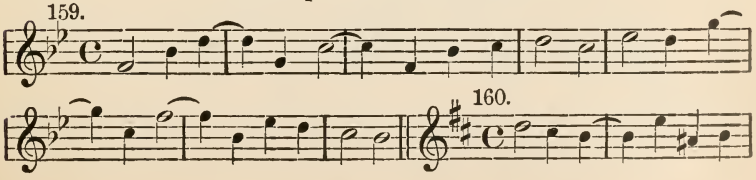
Work out the following melodies containing such retardations.

Model 26.



Examples for Practice.

159.



160.



161.

§ 40.

SUSPENSIONS FROM BELOW. — SUSPENSIONS IN SEVERAL PARTS.

All suspensions till now employed were resolved downward; and this is by far the commonest resolution. But, from the leading of the parts or the character of the melody, suspensions may result, which require an upward resolution. In musical terminology the suspensions already treated of are called *suspensions from above*, because they progress from above downward. On the other hand, suspensions which resolve upward, thus exhibiting the reverse progression, are called *suspensions from below.* They occur chiefly when some tone, by reason of its affinities in the key, has a tendency to progress upward; e. g.: the seventh (leading-note) of the scale.

214. 

Any other tone of the key can, however, be endowed by the melody with this tendency to resolve upward; e. g.: in the following case, which receives its first impulse from the seventh.



215.

Suspensions from below and above may be combined in two-part suspensions.

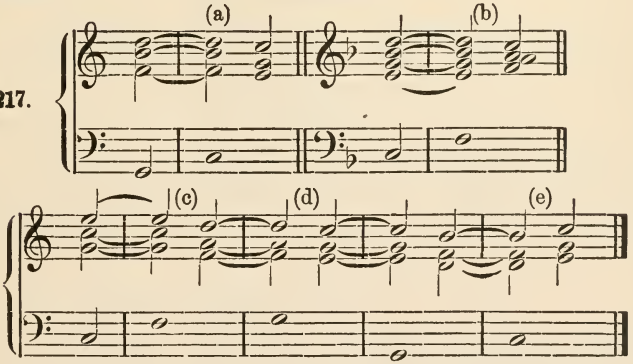
216.



Suspensions in several parts at once are usually combinations of suspensions from below and above; but they may belong to only one of these two classes.

In the resolution of polyphonic suspensions, either each single suspension is resolved regularly downward or upward, or else all of them together are conceived as one suspended chord, and treated according to the rules governing chord-progression.

217.



(a) Here the *second part*, as third of the dominant chord, takes advantage of its liberty to progress by a skip, and is, therefore, treated as a chord-tone, not as a suspension.

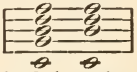
(b) Here all tones, whether as elements of the chord of the ninth (minor chord of the seventh), or as suspensions from below or above, are resolved regularly.

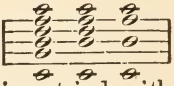
(c) Here the *c* of the alto, as a chord-tone to the bass *f*, progresses freely by the skip of a third; the suspension is, therefore, only in two parts.

(d) Here all parts, whether as single suspensions or as elements of suspended chords, are regularly resolved.

(e) Here all suspensions resolve upward, and, as elements of the chord, are likewise treated regularly.

Some of these forms of progression have even received special names (hardly used in English) as chords; thus, for example,

The tonic with suspended chord of the seventh (or diminished triad), called chord of the 11th. 218. 

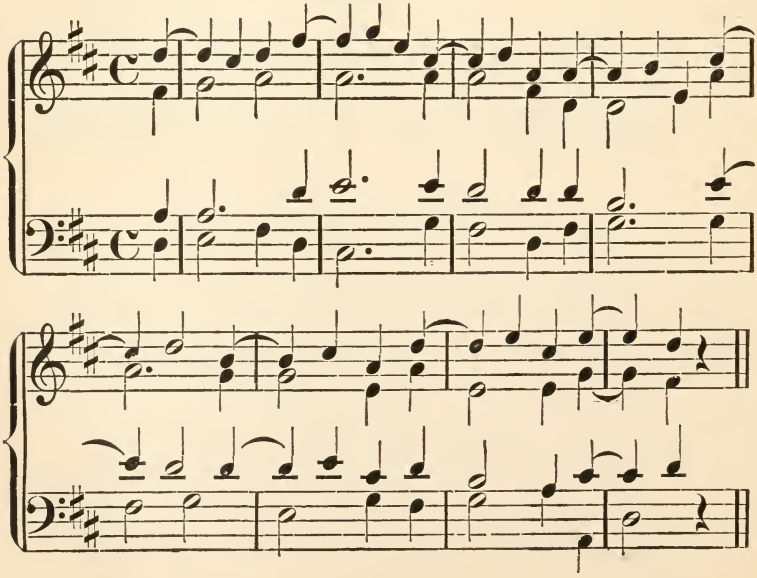
The tonic with suspended chord of the ninth (or minor [diminished] chord of the seventh), called chord of the 13th. 219. 

The so-called chord of the fourth and fifth is a triad with suspended fourth. 220. 

Exercise 27.

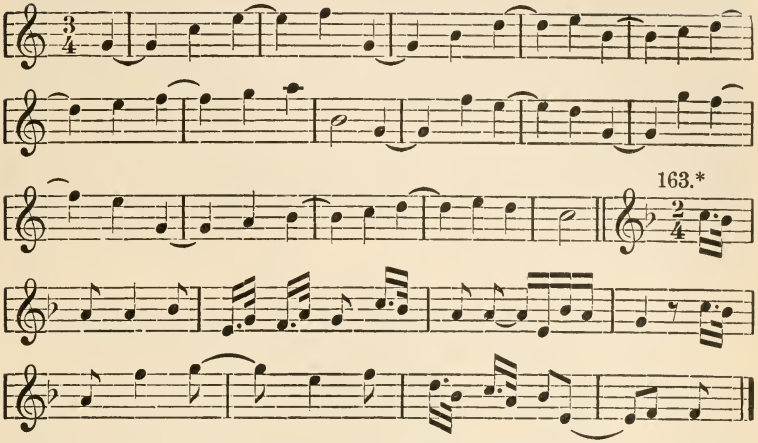
Harmonize the following melodies, employing suspensions from below and suspensions in several parts.

Model 27.



Examples for Practice.

162.



163.*

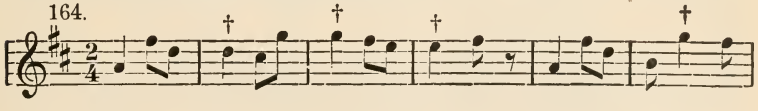
To the tied suspensions are also reckoned those preceded by the same tone in the same part *even without a tie.* In these, the preparing tone may be shorter than the suspended one.

221.

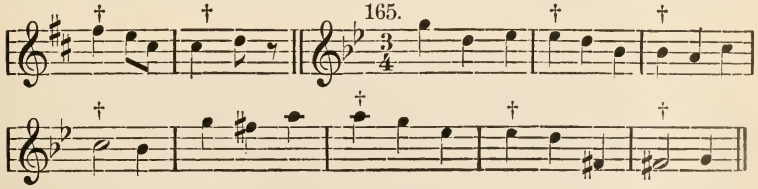


Suspensions of this class are contained in the following melodies belonging to Exercise 26.

164.



165.



* Lower parts pause for this *Auftakt* (fractional opening measure.)

166.



§ 41.

FREE, OR QUITE UNPREPARED, SUSPENSIONS.

Free suspensions are foreign tones entering, without preparation, on strong or weak beats, and resolving regularly upward or downward. They may embrace one, two, or more parts.

222.

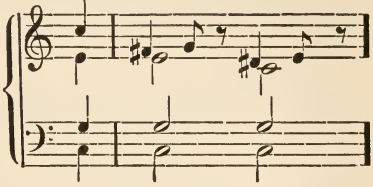


The sole restriction for these suspensions is, that the suspension, and the chord-tone retarded by it, shall not meet as a second in the same octave. Thus:

223. wrong:



but right:



Exercise 28.

Work out the following melodies in four parts.

Model 28.



Examples for Practice.

167. *Adagio.*





§ 42.

ANTICIPATION.

Tones, which enter one chord as foreign, and in the next chord and same part become chord-tones by means of ties or repetition, are called *anticipations;* because, while properly belonging to the second chord, they are already anticipated in the first.



Anticipations are rarer than passing-notes or suspensions.

We also class with the anticipations those tones which, although belonging only to the second chord, are not tied over from or repeated in the same part, but are simply present in the first chord as harmonic with the second.



At *b* the bass may either be considered as an anticipation, or the three highest parts as a suspension. For a course in composition, or for the composer as such, it is indifferent which explanation may be preferred.

Anticipations may occur in two or more parts at once.

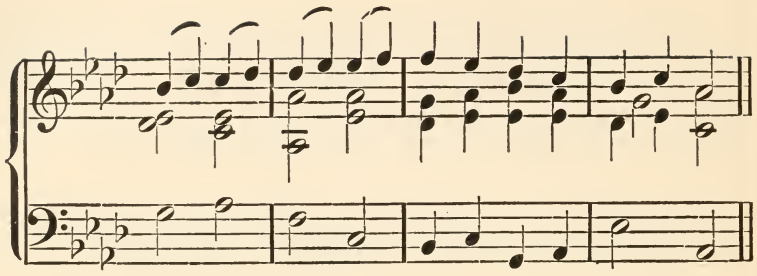


Exercise 29.

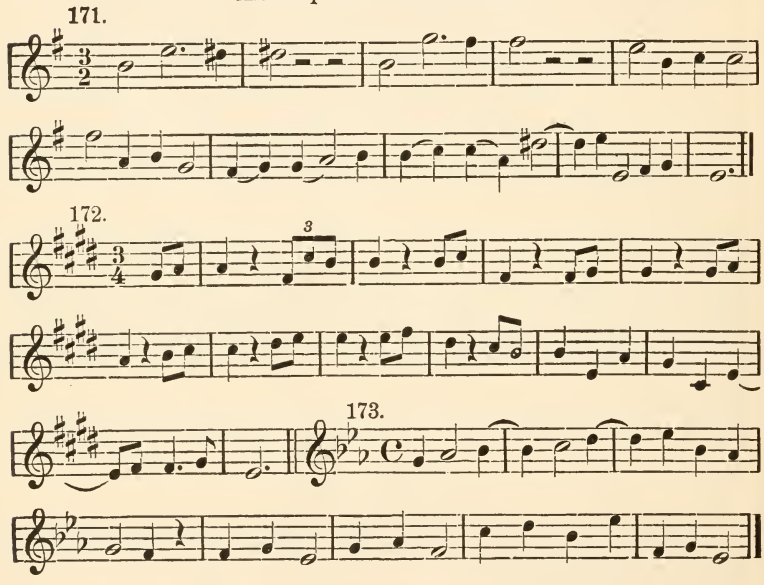
Work out in four parts the following melodies containing anticipations.

Model 29.





Examples for Practice.



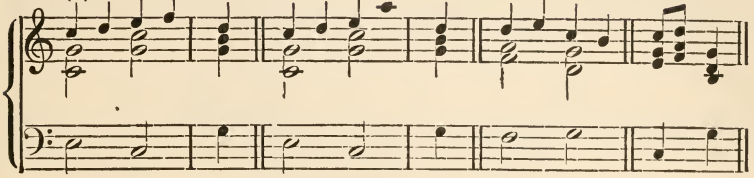
§ 43.

PROPER CHANGING-NOTES.

A tone interpolated between two harmonies without being a chord-note of either, and progressing at the same time by a skip, is called a changing-note; because, although a foreign tone, it is treated like a chord-note, and thus changes its harmonic character. The progression usually leads to a chord-

tone *(a, b)*, sometimes to a suspension *(c)*. At *d*, changing-notes are found in two parts, alto and tenor.

227. (a) † (b) † (c) † (d)

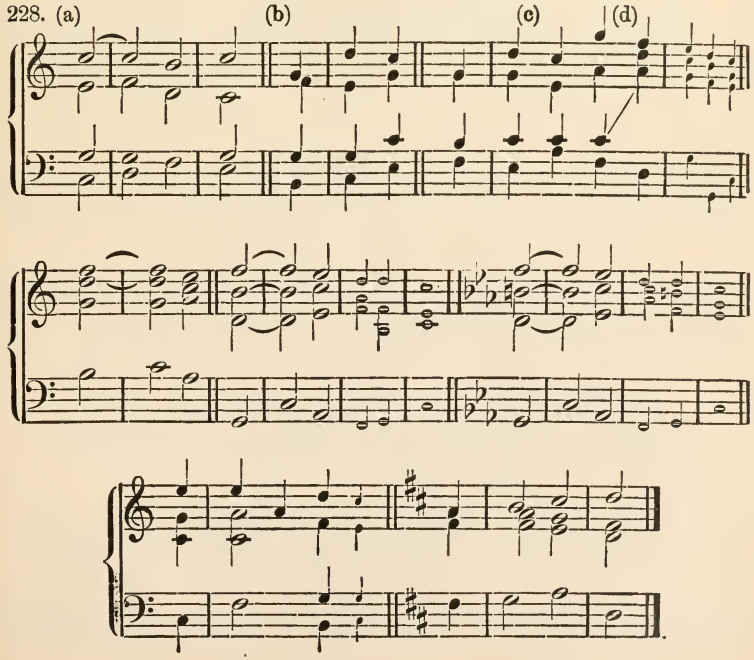


§ 44.

FREE TREATMENT OF FOREIGN TONES, AND COMBINATIONS OF THE SAME.

I. In the resolution of suspensions, either the position of the chord *(a, b)*, or the chord itself *(c, d)* may be changed.

228. (a) (b) (c) (d)



II. Sometimes the suspension is resolved by a skip; as a rule downward.

229.



III. Suspensions in two or more parts may be resolved one after the other, so that while one is sustained the other progresses. In such cases the manner of resolution may differ in the different suspensions.

230.



IV. Combination of suspension and passing-note.

231. (a) S. S. (b)





At *a* the bass progresses, before the regular resolution of the double suspension in the higher parts, to the passing-

note *e*; at *b* both lower parts take the double passing-notes *e*—*g*. The pupil can easily elucidate the other examples for himself.

V. Double suspension. Sometimes one suspension is preceded by another:

232.



The above is evidently based on a simple suspension with changing chords (compare I, this §):

233.



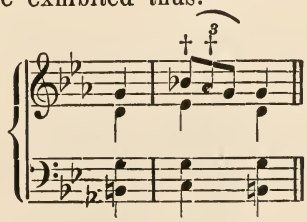
The next case is based on a suspension quite regularly treated:

234.



The combination of a double suspension with the regular resolution might be exhibited thus:

235.



from which, finally, the first example given might be derived.

VI. Suspensions also enter successively from below and above, resolution not occurring until the last suspension progresses to a chord-tone. This example of triple suspension in two parts is from Meyerbeer's "L'Africaine":

236.



where the figuration of the bass exhibits the harmony of the *G*-major triad. (Elem. Harm., § 136.)

Simple and common cases are:

237.



VII. Passing-note before suspension entering freely.

238.



derivable from:



Older (former) notation:



VIII. Passing-note between suspension and resolution.

239.



IX. Coincidence of anticipation and passing-note with progression within the chord.

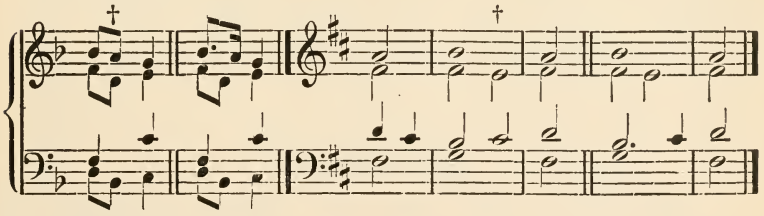
240. Bach.



(a) Here the bass passes through the intervals of the *B♭*-major triad, while the higher parts progress diatonically, thus producing the above-mentioned combination.

X. Through the coincidence of foreign tones with accompanying chord-progressions, pseudo-chords arise, easily derivable, by the aid of slight rhythmic alterations, from simple progressions with foreign tones. Each example below is followed by the simple harmonic form from which it was derived.

241. Bach.



Mendelssohn.





By comparison, the pupil can easily explain for himself similar combinations in works by the masters, and will be enabled to attempt such in the proper place.

The examples for practice in the next Exercise afford opportunity for their employment.

Exercise 30.

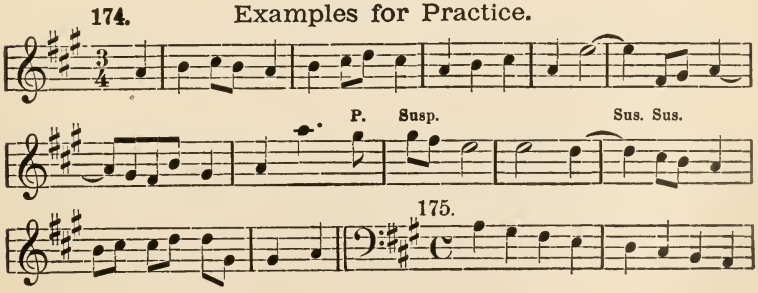
Work out in four parts the following examples for practice, employing combinations of foreign tones, but only those of which the pupil can give a clear and satisfactory explanation.

Model 30.





174. Examples for Practice.





Here the Chorales mentioned at the end of Part I may be worked out with foreign tones; or folk-songs containing foreign tones without modulating. An exhaustive treatment of foreign tones belongs, in a course of composition, to the department of Counterpoint.

III. Harmonic Modulation.

§ 45.

THE MEANING OF MODULATION.

To modulate, means, to pass over to another key. We say of a piece, that it modulates, when different keys occur in it. Modulations are *transient*, when the movement again returns to the original tonality (key); *permanent*, when this is not the case.

In the science of modulation, each chord is regarded as representing a key; and this in the capacity of one of the Principal Chords treated of in Part I, first section; or, as a Subordinate Chord representing the dominant.

Only by the progression of its tones can we recognize, that a melody modulates and, consequently, requires, in four-part harmony as in any other, chords of different keys; for, in many cases, the occurrence of chromatic signs only indicates, as the pupil knows from the exercises in Part II, the presence of foreign tones, which in themselves do not change the key.

242.



In the above *C*-major melody the first $f\sharp$ will, it is true, be regarded merely as a chromatic passing-note, for we certainly have no occasion to suppose that the key is contradicted in the first measure. But the second $f\sharp$, if harmonized as a suspension in *C*-major, would paralyze the entire movement.

243.



We must, therefore, think of some new key. But which?

The progression *g-b-d-b* in the melody indicates *G*-major clearly enough! — *G*-major is, therefore, to be introduced.

But in which chord of the new key is *f♯* contained?

It is found in each of the principal dissonant chords. As *f♯* lies in the soprano, the chords of the ninth and minor seventh are excluded, thus leaving the chord of the dominant seventh and the diminished triad. As the dominant chord fixes the new key more decisively than the diminished triad (§ 21), we choose the former, thus:

244.



The further progression corresponding at first with the opening, we choose for the present the first harmony.

§ 46.

CHANGE OF MODE.

The transition from one key to another of like name, as from *C*-major to *C*-minor and reversely, is not *properly* a modulation; because the relation to a particular tone as fundamental or *key-note* (Elem. of Harm., § 50) is not abandoned, (for the same tone retains this capacity), but merely the *mode* is changed.

Thus, directly after any tonic triad, that of the like-named key may follow, and the new mode may be adhered to thereafter as long as desired.

245.



246.



Thus in minor movements the major triad occurs very frequently as the closing chord.

247.



And in major movements, the *principal dissonant chords of the minor key* appear with major resolutions:

248.



likewise the *sub-dominant triad of the minor key*, and also *its substitutes*, with progressions to major:

249.



while on the other hand, those *principal chords of the major key* which do not contain the major sixth of the latter, such as the dominant chord and the diminished triad, may be at any time resolved to minor.

250.



On the contrary, those chords of the major key possessing the major sixth, the major chord of the ninth and minor chord of the seventh, resist this resolution.

251.

Never, therefore:

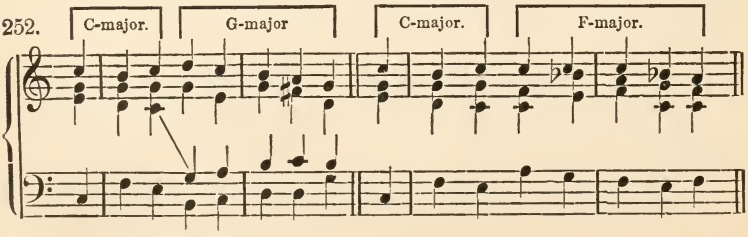


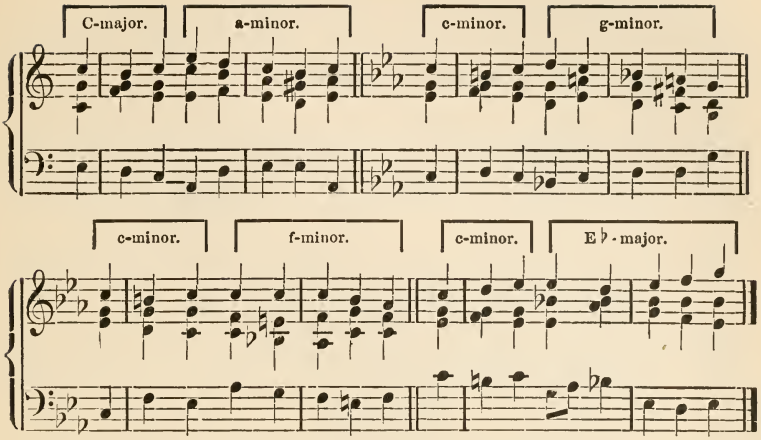
§ 47.

MODULATION TO ADJACENT KEYS.

Nearly-related and relative keys follow each other directly; as, in the next examples, one tonic triad follows the other, the triads of the new key sufficing to introduce the same:

252.





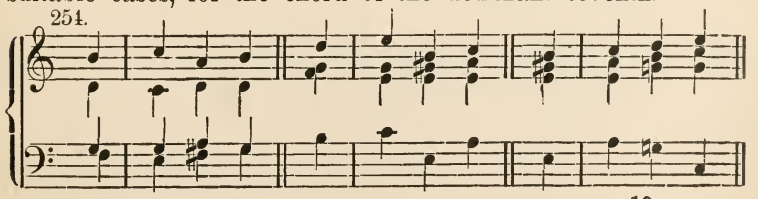
Or the tonic triad of a key is followed by a dissonant principal chord of the related or relative key, which then resolves regularly to the tonic triad of the latter:

253.



Here, too, the dominant triad may be substituted, in suitable cases, for the chord of the dominant seventh.

254.



The subordinate triads, and subordinate chords of the seventh on the second degree, may also be readily employed in connecting keys so nearly related.

255. C G C a c g



The following melody contains modulations of this kind.

256. C G C



In all these cases, it is the close relationship between the keys which connects them. Though common tones are usually prominent in this connection, which tones will hereafter be the essential connecting-links of the modulation, this must here be regarded as accidental, although a natural result of the relationship. The distance between keys in the circle of fourths and fifths determines the degree of relationship. (Elements of Harmony, § 53).

A. The Dissonant Principal Chords

as a means of modulation from the tonic triad of a key to that of any other key.

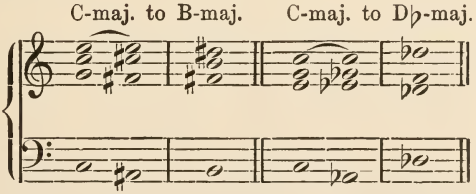
§ 48.

GENERAL SKETCH OF THE PROCEDURE.

The usual procedure in a modulation consists in the introduction of a dissonant principal chord of the new key, and its resolution to the tonic triad of the latter.

RULE: The introduction of the dissonant principal triad must be prepared by, at least, one common tone present in the preceding chord.

257.



An exception to the above is found in the few cases discussed in the last §, in which the dissonant principal chord of the related or relative key has no tone in common with the preceding triad. In these cases, the close affinity of the keys renders such a mediation superfluous. Still, even these modulations may, of course, be effected according to the given rule The pupil should in each case carry them out in both ways; e. g.: *a*-minor to *C*-major:

258.



Where the dissonant principal chord has no tones in common with the preceding triad, a chord is introduced between them having tones in common with both, and capable of following the first chord within the limits of one key, according to the regulations given in Part I.

This interpolated chord can either be a triad, a chord of the sixth (as below at *a*, *c*), or, if it admits of treatment according to the given rules, a chord of the fourth-and-sixth *(b)*.

To facilitate the leading of the parts, the given tonic triad may also be taken as a chord of the sixth *(d)*. In the course of harmonic progressions, modulations likewise occasionally follow a chord of the $\frac{6}{4}$ *(e)*, without affecting the regular treatment of this latter.

259.

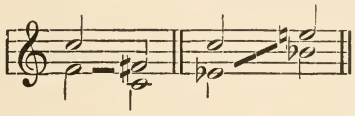


§ 49.

CROSS-RELATION.

As modulation brings chords of distant keys into immediate contact, it also unavoidably induces very harsh har-

monic progressions. By a skilful leading of the parts, these may, however, be quite avoided in most cases, and much softened in others. The so-called *cross-relation* often occurs in modulating.

260. 

Cross-relation results, when any tone in one part is followed by [or enters together with] a tone in another part which, though bearing the some *root-name* (letter-name) as the first, is higher or lower by a semitone, and enters by a skip. It makes no difference whether the tones forming the cross-relation lie in the same octave, or in different octaves. In the following examples

261. 

the cross-relation is found at *(a)* between soprano and alto, at *(b)* between soprano and tenor, at *(c)* between soprano and bass, at *(d)* between alto and tenor.

The factors coöperating to form the cross-relation are:

1. Two tones belonging to the same root-degree and differing in pitch by a semitone enter in immediate succession (i. e.: two tones which form a *chromatic* semitone [augmented prime, augmented or diminished octave]),

2. In two different parts,

3. The second tone entering by a skip.

The cross-relation is, therefore, *never* present, when the two different tones of the same root-degree lie in the *same* part, this latter progressing by a degree (chromatically) ; as :

262.

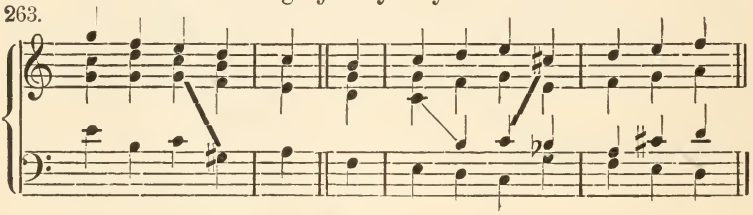


and it may in this manner be avoided in modulation.

But when other reasons exclude this procedure, e. g.: where a given melody leads to the cross-relation, it should at least be avoided in the outer parts.

Good vocal leadings justify any cross-relation.

263.



§ 50.

CHORD OF THE DOMINANT SEVENTH IN MODULATION

Exercise 31.

Modulate with the dominant chord of the seventh (1) as a written exercise, (2) without notes at the instrument:

from *C*-major to every major key,
from *C*-major to every minor key,
from *C*-minor to every major key,
from *C*-minor to every minor key.

Carry out like modulations from a key having a signature of many sharps or flats to any other keys, even to those whose signatures do not occur, but with which we are acquainted through the Elem. of Harm. and Not., § 47; such as *G♯*-major, *d♭*-minor, etc.

Chief rules, and examples, are given in § 48.

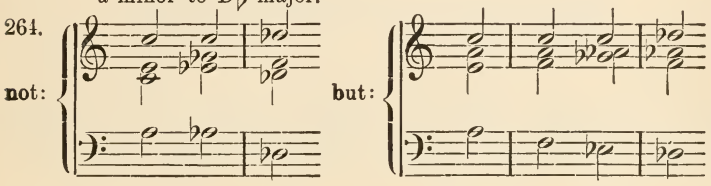
A few special directions may follow here:

1. In this exercise, and similiar ones to follow, the pupil should aim, by the positions of the chords, to render every transition as agreeable to the ear as possible. Nevertheless,

some will result, which despite all regularity sound hard. But in the proper place, as parts of further combinations which are totally lacking here, such transitions may not only be justifiable, but really effective. At all events, familiarity with them belongs to the composer's mental equipment.

2. In modulations starting with the minor triad, the pupil should avoid making the minor *third* of the minor tonic triad the *leading-note* (third of dominant chord) for the key to be introduced. Therefore,

264. a-minor to D♭-major.



The introduction of the augmented chord of the sixth would justify even these modulations as enharmonic modulations. Their isolated occurrence in master-works does not impeach the validity of the above rule.

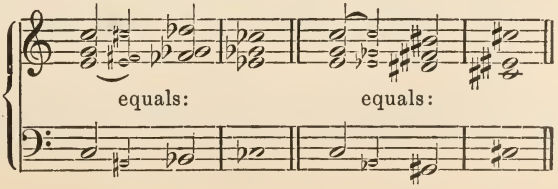
3. For the modulation from *C*-major to *C*♯-major or *C*♭-major no triad offers, which by itself would serve as a connecting link. Two chords must consequently be interpolated here.

265.



By the aid of enharmonic changes (*C*♯-major = *D*♭-major, *C*♭-major = *B*-major) both modulations may be carried out without interpolating a chord.

266.



Such cases are also met with in the other exercises in modulation. The pupil should always carry them out in both ways.

4. The dominant triad may be substituted for the dominant chord, when the thus omitted seventh is present in the preceding chord.

267.



Remark. A modulation is *diatonic* which employs only diatonic intervals; *chromatic*, when it employs the chromatic semitone; *enharmonic*, when an enharmonic change takes place.

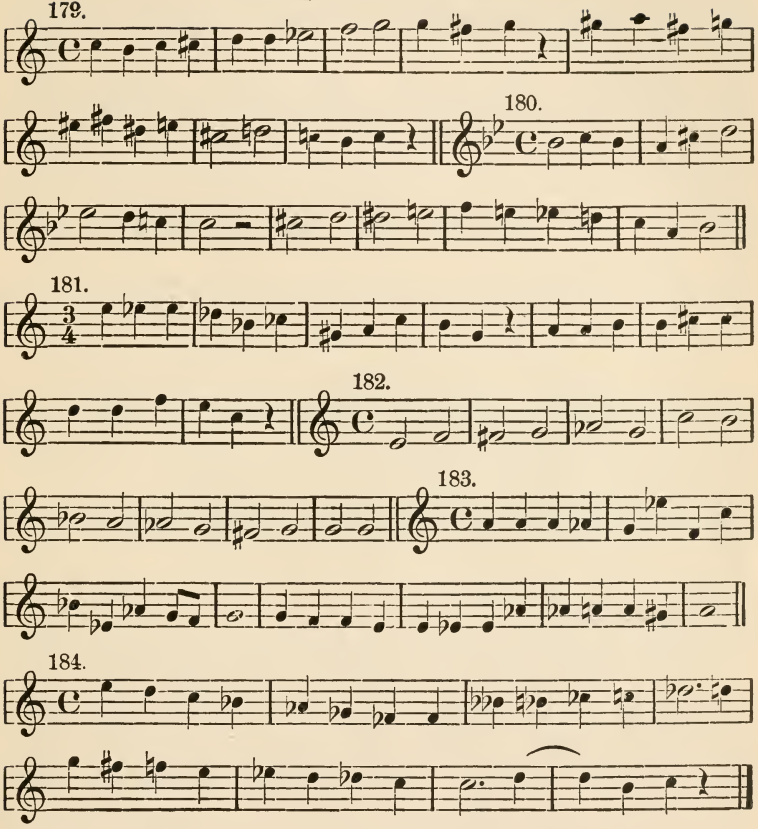
Exercise 32.

Harmonize the following melodies, overladen with modulations, modulating by aid of the dominant chord.

Model 31.

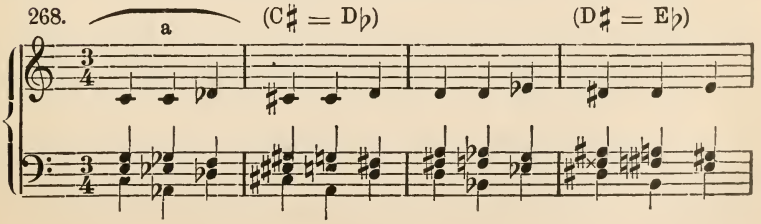


Examples for Practice.



§ 51.

HARMONIC SEQUENCES.





On examining this last example, we perceive that the same modulation is repeated several times on different degrees, all parts progressing continuously and regularly. Such harmonic successions are called *harmonic sequences.*

In our example, the modulation always passes from one key to another in the fifth degree of affinity, i. e.: whose key-note is a semitone higher; and occasionally employs the enharmonic change.

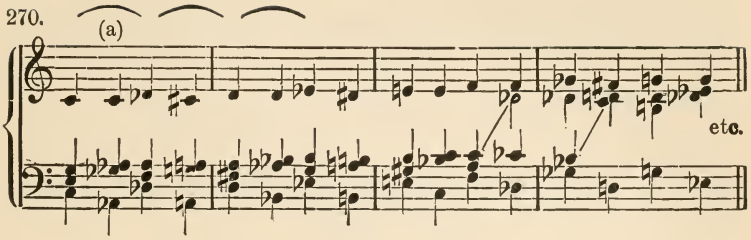
The regularly repeated modulation of a sequence is called its *motive.* The motive of the present sequence, which is the modulation by the dominant chord into that key whose key-note lies a semitone higher, is marked out under *a.* It fills exactly one $^3/_4$ measure. Each succeeding measure is a repetition of the same a semitone higher. In common time this motive might take on the following, or many other, rhythmical forms.

269.



The same sequence may be exhibited in more condensed form, by contracting the last and first chords of each two successive repetitions of the motive to a single chord.

270.



A few motives for sequences follow, with indicated progression, whose working-out is left to the pupil.

271.



The manner, or style in which a sequence is to be carried out, i. e.: *how* the regular connection of the repetitions is produced, is not always achieved according to the principle of

absolute symmetry hitherto observed. Thus, sequences may be formed by alternating in *mode*, which admit of greater unity in the modulation by not receding so far from the first key.

272.



The strictness in progression may also be modified in favor of a diatonic leading. Thus, in the following sequence, the modulation always leads into keys based on intervals of the diatonic scale.

273.



The close would perhaps be better so:

274.



this modulation not leading so far away from the chief key.

In this sequence, not only the mode changes, but changes also occur in the leading of the soprano in the two places marked †. However, it is on the whole decidedly preferable to the following in absolutely strict progression:

275.



wherein all connection with a fixed key is quite lost.

N.B. To enable a further extension of the sequences, it is here permitted to overstep the compass of the voices.

Exercise 33.

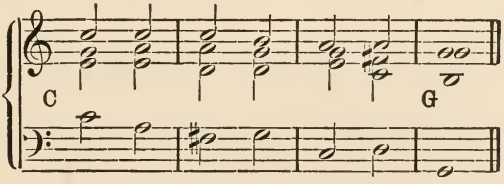
Form sequences, using the dominant chord in modulating, (1) in writing, (2) without notes at the instrument. Here the inversions should not be neglected. No. 275 shows the ascending, No. 271*b* the descending chromatic scale. Set the chromatic scale also in the bass and inner parts. Proceed in like manner with the enharmonic scale in Nos. 270 and 271*a*.

§ 52.

MODULATORY PHRASES.

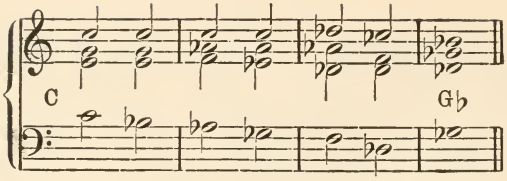
In composition and musical practice, it is often desirable to carry out a modulation through a long succession of chords, with avoidance of all harsh progressions and abrupt transitions; i. e.: to form a modulatory phrase. With nearly-related keys, connective subordinate triads are interpolated, and a cadence added,

276.



with distantly-related keys, a connection is sought by the gradual introduction of distinctive tones.

277.



Exercise 34.

Form modulatory phrases from Major to Major.
from Minor to Minor.
from Major to Minor.
from Minor to Major.

§ 53.

MAJOR CHORD OF THE NINTH IN MODULATION.

The major chord of the ninth admits (§ 46) of a regular major resolution. It is, therefore, employed only in modulating from a major or minor key to a major key.

278.



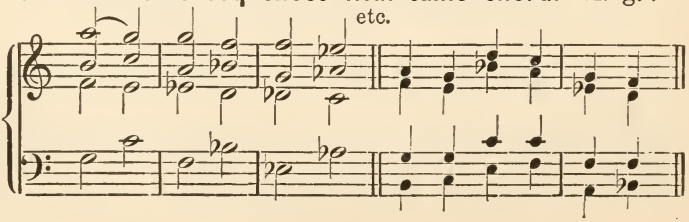
Employment of it restricted by the difficulty of introducing the major chord of the ninth. (P. 39, 40.)

Exercise 35.

Modulate (1) in writing, (2) at the instrument, with the major chord of the ninth from major and minor keys to major keys.

Form harmonic sequences with same chord. E. g.:

279.



§ 54.

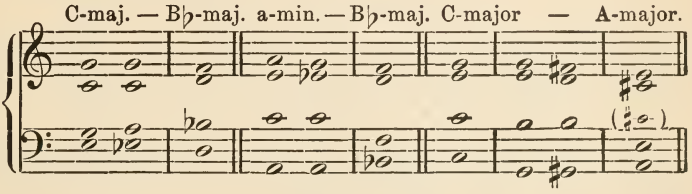
MINOR CHORD OF THE SEVENTH IN MODULATION.

The minor chord of the seventh in major also admits of no resolution to minor.

Exercise 36.

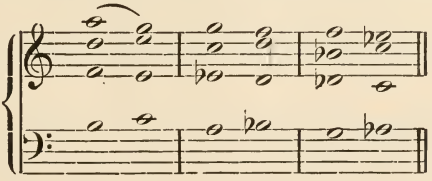
Modulate with the minor chord of the seventh (1) in writing, (2) at the instrument, from Major to Major; and from Minor to Major. E. g.:

280.



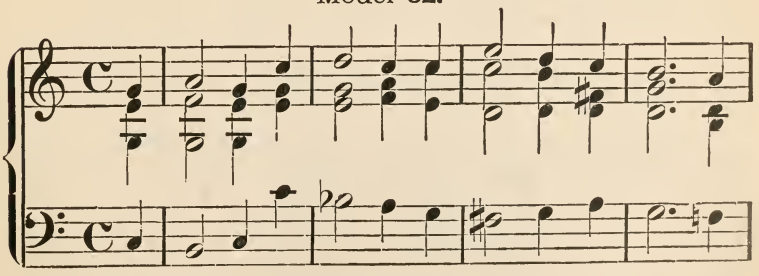
Form harmonic sequences with same chord. E. g.:

281.



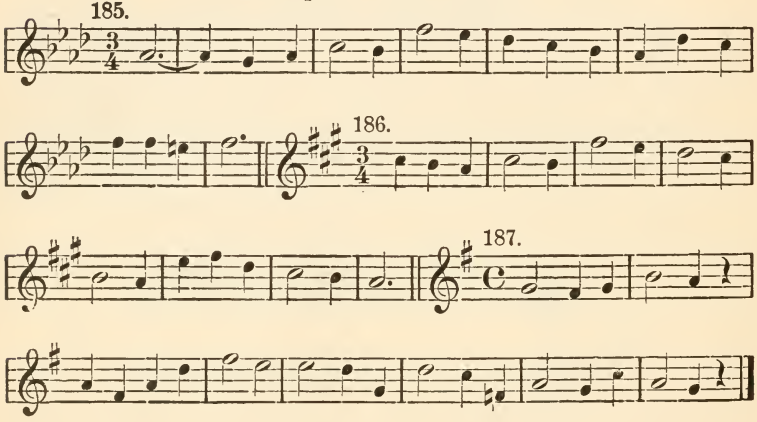
Harmonize the following melodies with the major chord of the ninth and minor chord of the seventh; and form modulatory phrases with both chords.

Model 32.





Examples for Practice.



§ 55.

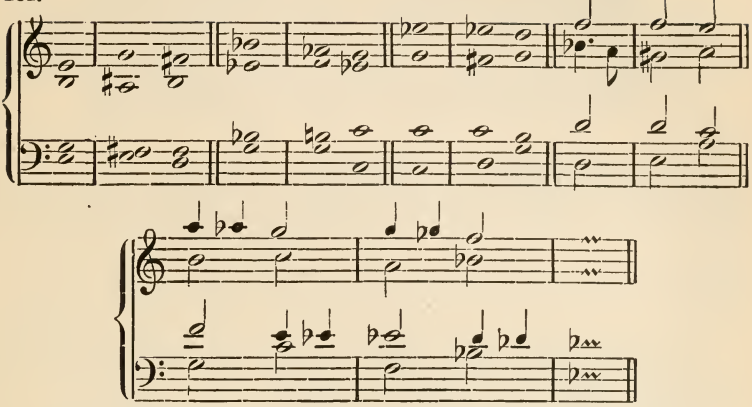
MINOR CHORD OF THE NINTH IN MODULATION.

The minor chord of the ninth belongs to the minor key, but may also (§ 46) be resolved to major.

Exercise 37.

Modulate with the minor chord of the ninth
from Minor to Minor,
from Major to Minor,
from Major to Major,
from Minor to Major.

282. e — b. E♭ — c. c — G. B♭ — a.



Employment of it restricted by difficulty of introduction.

§ 56.

DIMINISHED CHORD OF THE SEVENTH

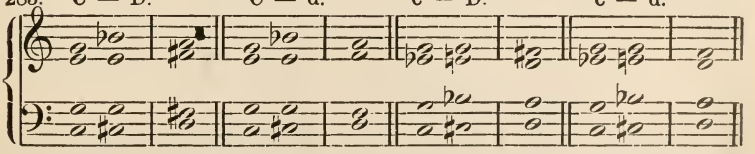
The diminished chord of the seventh resolves (§ 46) to minor or major. After the dominant chord, it is the most serviceable chord in modulating.

Its multifarious signification as an enharmonic chord will be noticed later. For the present, the pupil should resolve each diminished chord of the seventh in accordance with its notation.

Exercise 38.

Modulate with the diminished chord of the seventh from one minor key to every other minor key, from one major key to every minor key, from one minor key to every major key, from one major key to every other major key. E. g.:

283. C — D. C — d. c — D. c — d.



Form sequences with the dimin. chord of the seventh.



In freer sequences, like No. 272, one may alternate between the minor and diminished chords of the seventh.

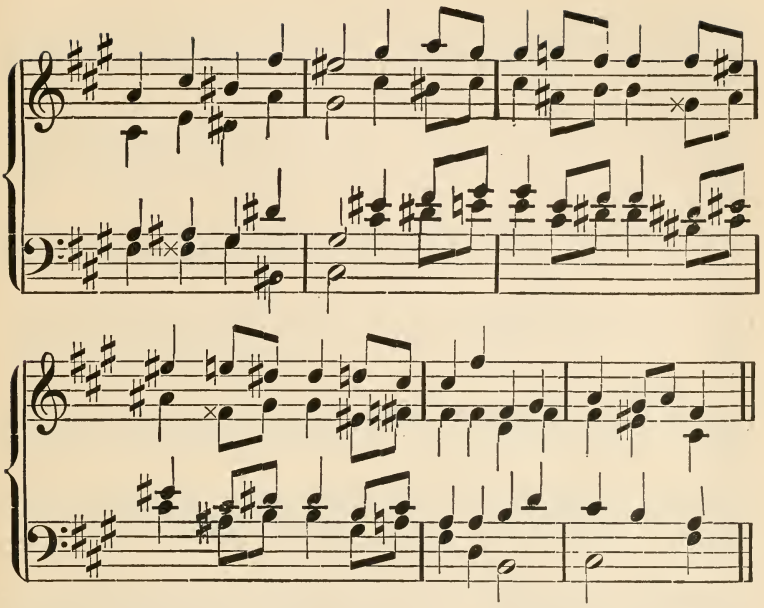
Form modulatory phrases with the diminished chord of the seventh. Form the chromatic and enharmonic scales (Exercise 33) with the diminished chord of the seventh.

Exercise 39.

Harmonize the following melodies. These principally give occasion for employing the diminished chord of the seventh; also occasionally the minor chord of the ninth and other chords heretofore used in modulating. Some begin with dissonant chords (like the **Model**), No. 201 even in a key at variance with the signature, i. e.: with the seventh of *g*-minor, the exercise being in *B♭*-major. The conditions explained in § 46, more especially the resolution of chords in the minor mode to major, and the alternation of dissonant principal chords (§ 22), are applicable here.

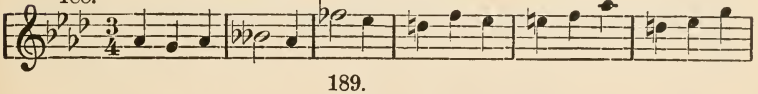
Model 33.



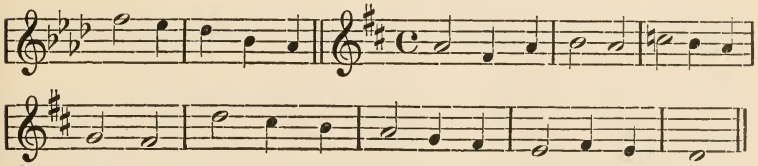


Examples for Practice.

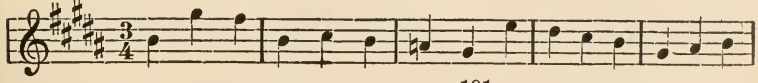
188.



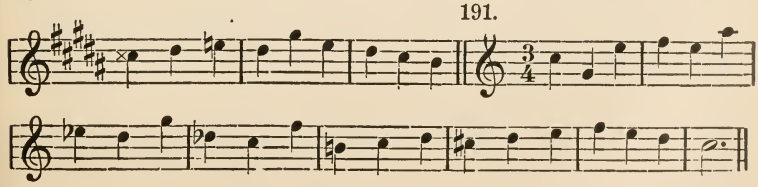
189.



190.



191.



192.

193.

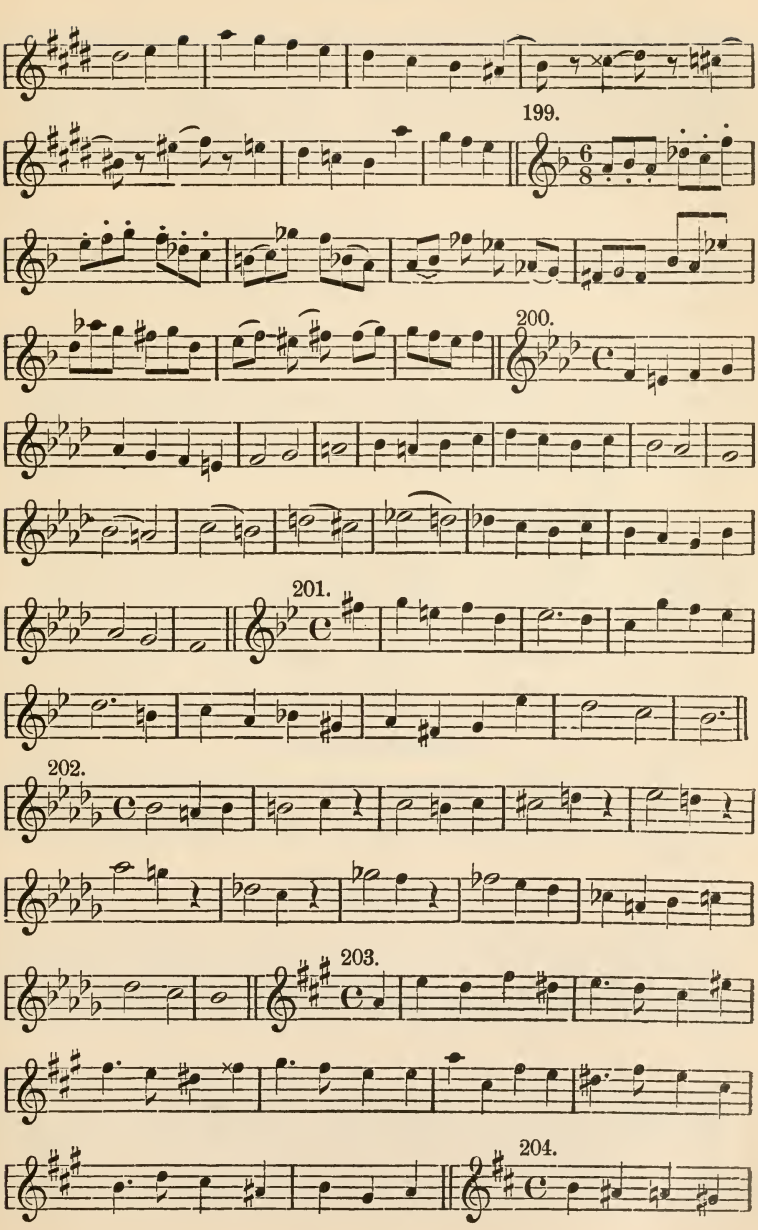
194.

195.

196. *Andante.*

197.

198.


199.
200.
201.
202.
203.
204.



§ 57.

ENHARMONIC CHARACTER OF THE DIMINISHED CHORD OF THE SEVENTH.

Every diminished chord of the seventh belongs, through the enharmonic change, to four different keys, e. g.:

b - d - f - a♭, *C*-minor; fundamental chord = *b - d - f - a♭*.
b - d - f - g♯, *a*-minor; „ „ = *g♯ - b - d - f*.
b - d - e♯ - g♯, *f♯*-minor; „ „ = *e♯ - g♯ - b - d*.
b - c× - e♯ - g♯, *d♯*-minor; „ „ = *c× - e♯ - g♯ - b*.*

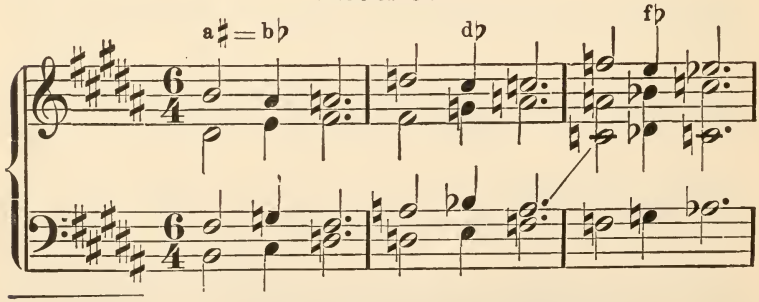
In each of these significations, it may also resolve to the like-named major key; thus, in the present case, to *C*-major, *A*-major, *F♯*-major, *E♭*-major (*D♯*-major).

There are, consequently, but three diminished chords of the seventh containing different tones each from the other; those remaining are mere enharmonic changes of these three.

Exercise 40.

The following melodies afford opportunity for applying the enharmonic character of the diminished chord of the seventh.

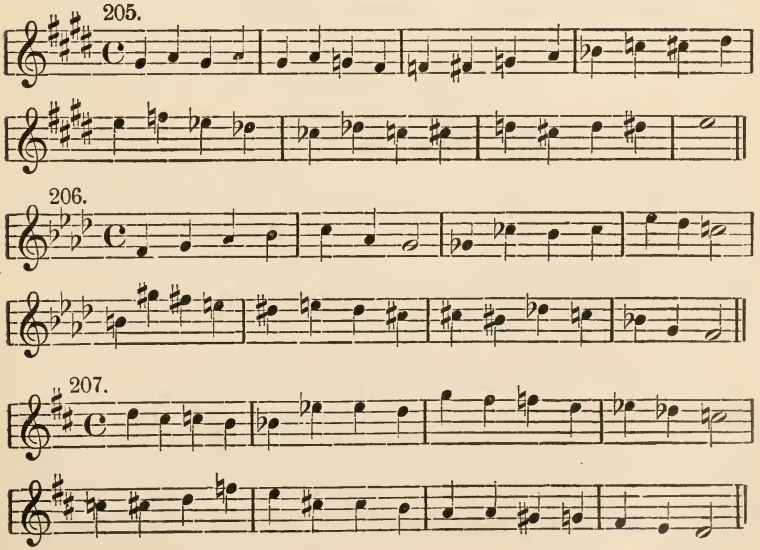
Model 34.



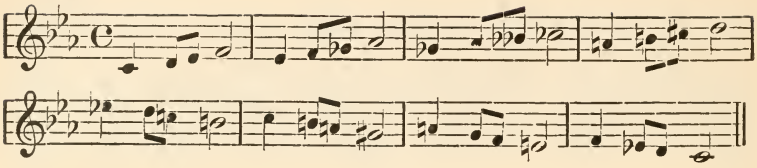
* This last may also be written *d-f-a♭-c♭*, in *e♭*-minor.



Examples for Practice.



208.



§ 58.

THE DIMINISHED TRIAD.

Among the dissonant principal chords, the diminished triad is that least adapted for decided modulations. Its serviceableness depends chiefly upon the tones preceding it, for only through these does it gain a tendency toward a definite key.

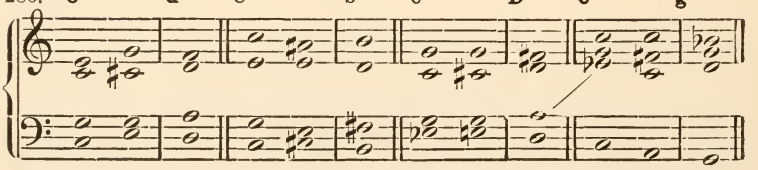
Inasmuch as it may be regarded as a fraction of a diminished chord of the seventh, it may participate in the enharmonic modulations of this latter:

b - d - f, *C*-major (minor); fundam. chord = *b - d - f*.
c♭ - d - f, *e♭*-minor; „ „ = *d - f -(a♭)- c♭*.
b - d - c♯, *f♯*-minor; „ „ = *e♯-(g♯)- b - d*.

Exercise 41.

Modulate with the diminished triad
from Major to Major,
from Major to Minor,
from Minor to Major,
from Minor to Minor.

286. C d C b c D e g



§ 59.

SUBSTITUTES FOR THE SUB-DOMINANT AS AGENTS IN MODULATION.

As agents in modulation, for which we till now have employed interpolated triads or their inversions, the substitutes

for the sub-dominant of the key to be introduced may also serve, in their regular progression in cadence-form; progressing, either through the dominant chord, or through the chord of the $\frac{6}{4}$ and dominant chord, to the tonic triad.

C-major to e-minor.

287.



For introducing these chords, the rules given in Part I must be carefully observed.

Freer introductions of subordinate chords on the second degree are, (according to § 26), as follows:

288.



Exercise 42.

Modulate, through agency of subordinate triad II in major, (1) from Major to Minor, (2) from Minor to Minor.

Modulate, through agency of subordinate triad II in minor, (1) from Major to Minor, (2) from Minor to Minor.

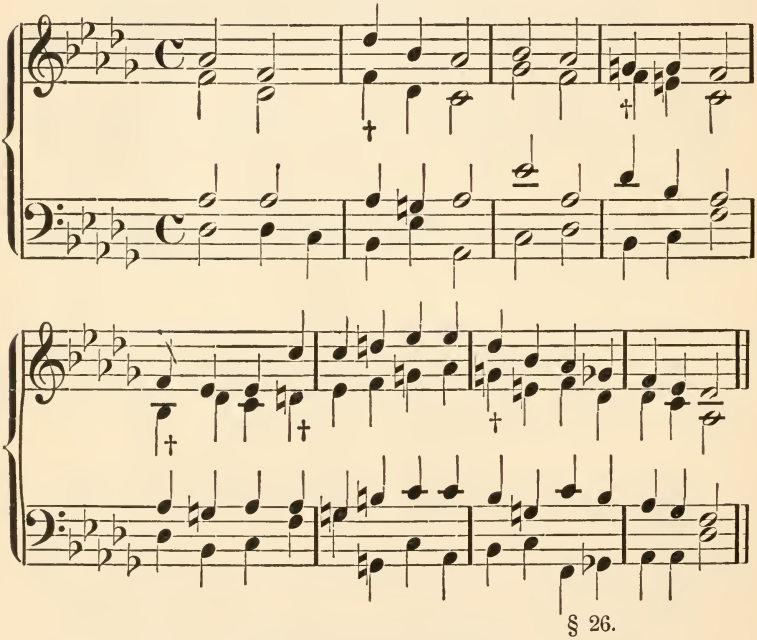
Modulate, through agency of the subordinate chord of the seventh in minor, (1) from Major to Minor, (2) from Minor to Minor.

Form modulatory phrases with all material now at command.

Exercise 43.

Harmonize the following melodies, which give occasion for modulation with the subordinate chords.

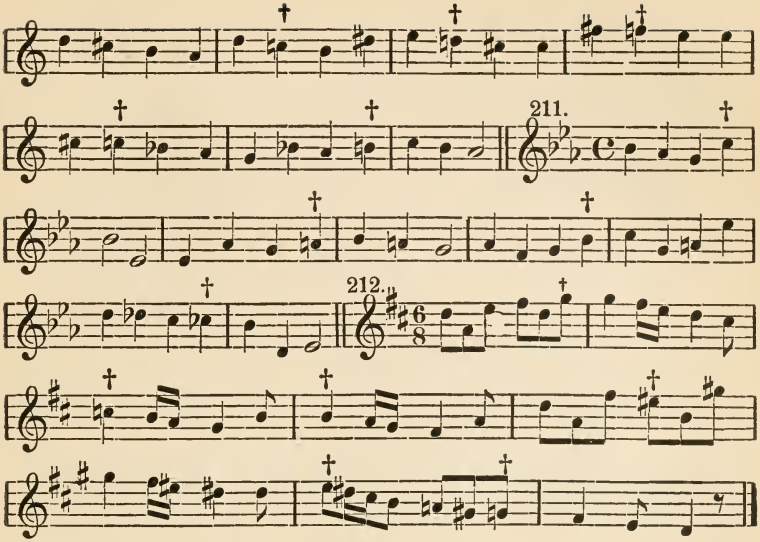
Model 35.



Examples for Practice.

Tones marked † are to be harmonized with one of these subordinate chords.





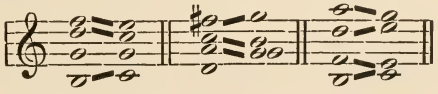
B. Deceptive Progressions.

§ 60.

MEANING OF "DECEPTIVE PROGRESSION".

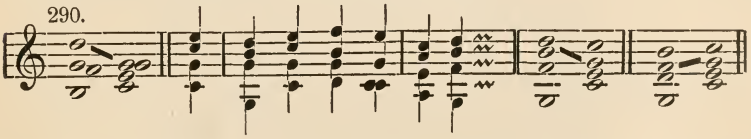
The dissonant principal chords were at first restricted to certain progressions of the separate parts.

289.



We were then permitted to free single parts from the strict resolution, in order to better the melody, the leading of the parts, or to secure a fuller harmony.

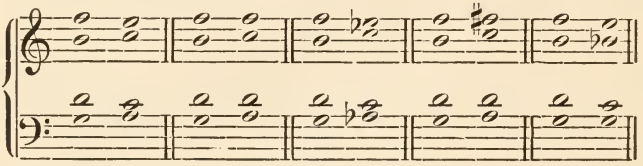
290.



But that chord, to which the dissonant chord was obliged to resolve, remained unaltered by these liberties, i. e.: was always the tonic triad.

This rule too must now be annulled in favor of further artistic freedom. We shall form progressions of dissonant principal chords, which do not lead to the tonic triad, but to other chords of the same or other keys, as may be desired.

291.



Such progressions are called *deceptive.*

As agents in forming deceptive progressions we have

1. Common Tones:

292.



2. Near relationship of the keys:

293.



3. Partial regularity of resolution:

294.



In all cases great care is required in the leading of the parts; this may occasionally be benefitted by foreign tones.

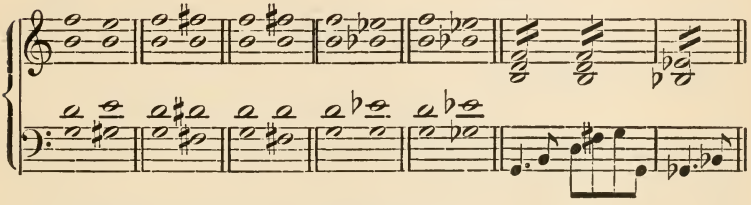
§ 61.

DECEPTIVE PROGRESSIONS OF THE DOMINANT CHORD.

We suppose the dominant chord of a key to be given, and progress from it, through deceptive progressions according to the above rules, to any desired key.

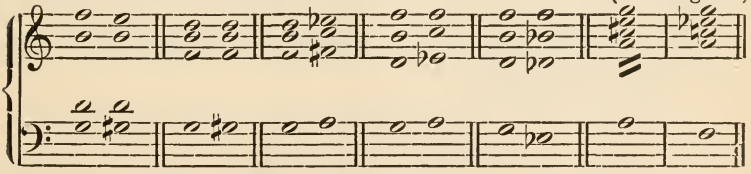
The deceptive progression may lead *to a triad:*

295. Mozart. etc.



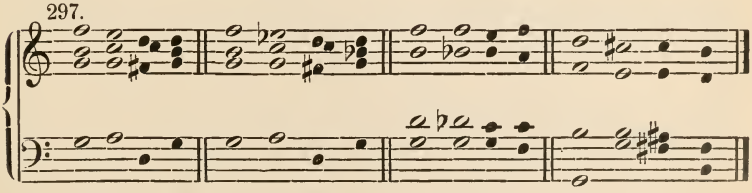
To a *dissonant principal chord:*

296. Wagner. ("Lohengrin").



To the *subordinate chord of the seventh* (which here, as elsewhere, is often stubborn):

297.



We see, that each modulation can be effected in various ways; and it is excellent practice, to work out each as variously as possible.

Exercise 44.

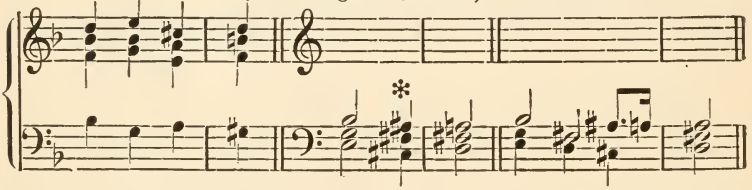
Form numerous deceptive progressions of the dominant chord of the seventh and its inversions in all keys.

§ 62.

DECEPTIVE PROGRESSIONS OF THE DOMINANT TRIAD AS A SUBSTITUTE FOR THE DOMINANT CHORD.

When the dominant triad represents the chord of the seventh, and is, in consequence, bound to its resolution, divergent progressions of the same must also be considered as deceptive progressions.

298. Wagner. (Tannh.) From same.



In the last example, the sixteenth-note *a* of the first measure is an anticipation.

§ 63.

DECEPTIVE CLOSE.

A deceptive progression is called a deceptive close, when it takes the place of a close.

299.



The deceptive close of the dominant chord to the triad on the sixth degree, shortly before the actual close, is specially frequent both in major and minor. (No. 293, first and last examples).

§ 64.

DECEPTIVE PROGRESSIONS OF THE OTHER DISSONANT PRINCIPAL CHORDS.

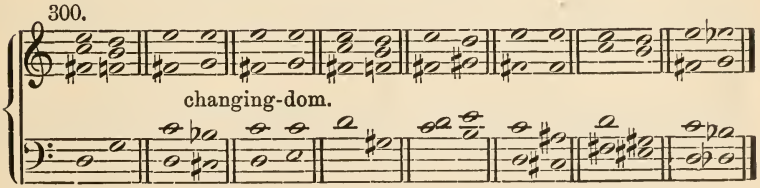
As the deceptive progressions of the other dissonant principal chords are effected in precisely the same manner as those of the dominant chord, they may all be comprehended under a single exercise with subdivisions and examples.

Exercise 45.

Form deceptive progressions from one key to all others, with fundamental chord and inversions

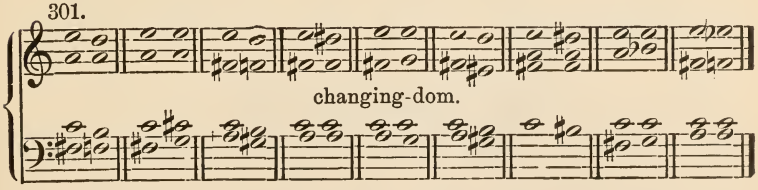
I. Of the major chord of the ninth:

300.



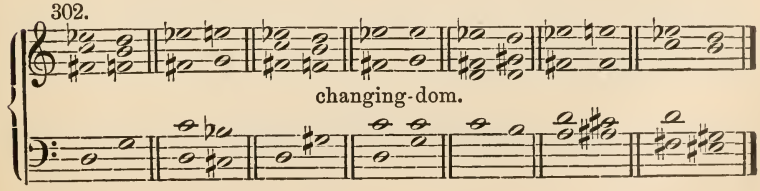
II. Of the minor chord of the seventh:

301.



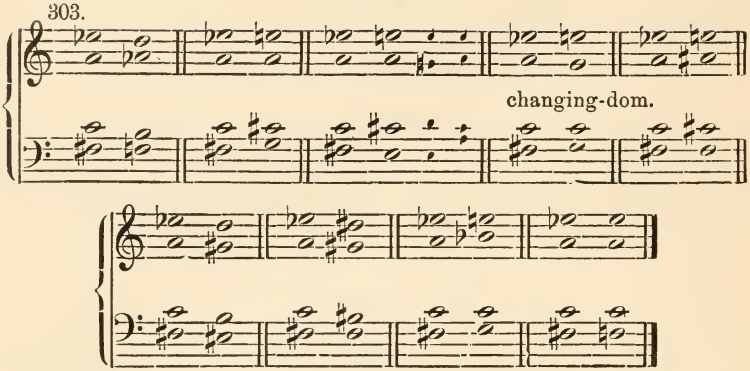
III. Of the minor chord of the ninth:

302.



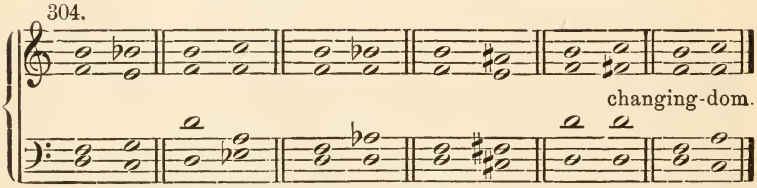
IV. Of the diminished chord of the seventh:

303.



V. Of the diminished triad:

304.



Special attention must be called to two deceptive progressions; namely, that of the dominant chord (usually $\frac{6}{5}$) to the chord of the $\frac{6}{4}$ of the most nearly-related key in the Circle of Fourths; e. g.: the dominant chord in *G*-major to the chord of the $\frac{6}{4}$ in *C*-major:

305.



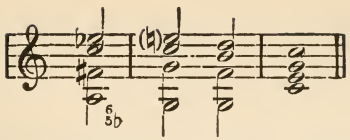
and that of the diminished chord of the seventh (usually fundamental chord, sometimes $\frac{6}{5}$) to the chord of the $\frac{6}{4}$ of the most nearly-related key in the Circle of Fourths; e. g.: the diminished chord of the seventh in *g*-minor to the chord of the $\frac{6}{4}$ in *C*-major or *c*-minor:

306.



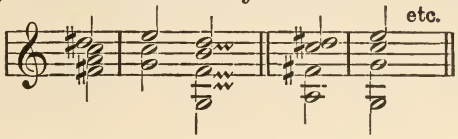
Or else:

307.



Sometimes the diminished seventh, when followed by a major chord, is written as a major sixth:

308.



Both deceptive progressions are of daily occurrence in modulatory phrases and cadences.

Cadence.

309.



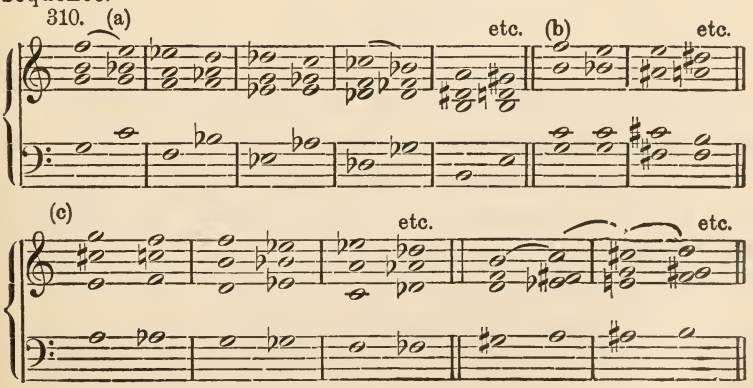
Both are customarily designated as *changing-dominant* progressions, because the dissonant chords belong to the dominant of the dominant, the so-called changing-dominant.

§ 65.

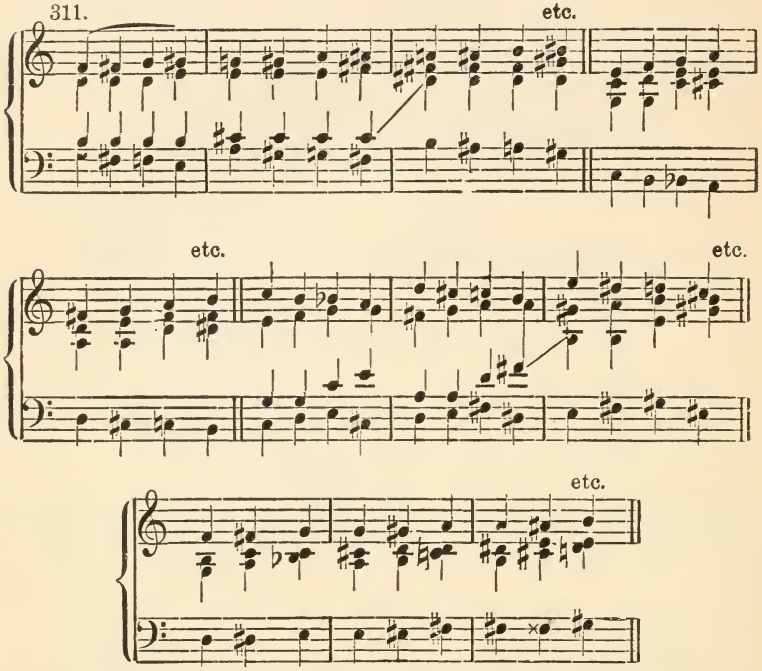
SEQUENCES WITH DECEPTIVE PROGRESSIONS.

Any deceptive progression may be made the motive of a sequence.

310.



In like manner combinations of various deceptive progressions, by themselves or with other added modulations, may serve for motives of sequences.



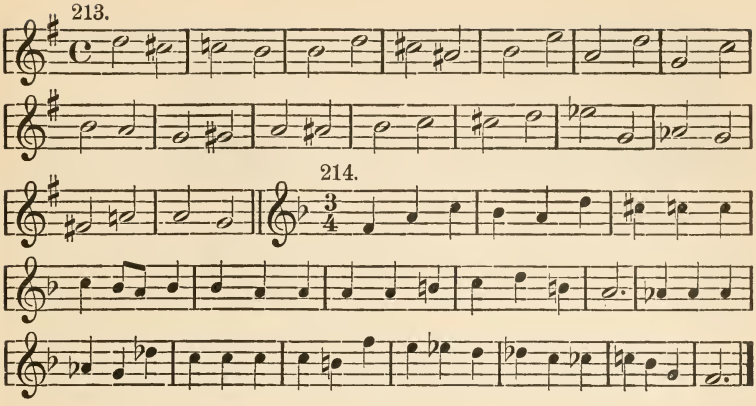
Exercise 46.

1. Form sequences with these and similar simple and compound motives, particularly according to No. 310 *a*, *b*, with the descending chromatic and enharmonic scale.

2. Form modulatory phrases with regular modulations and deceptive progressions, tone-repetitions and cadences with deceptive progressions. Harmonize the ascending and descending melodic minor scale.

3. Harmonize the following melodies, which give occasion to employ deceptive progressions.

213.



214.

§ 66.

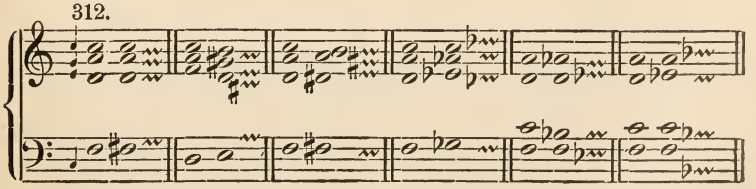
DECEPTIVE PROGRESSIONS OF THE SUBORDINATE CHORD OF THE SEVENTH.

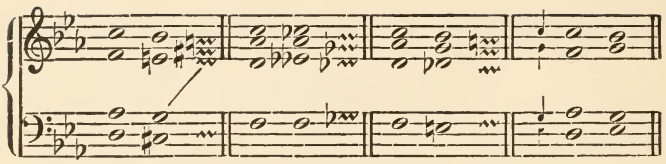
The regular progression of this chord leads, as we are aware (§ 28), *either* to a dissonant principal chord or to the dominant triad, *or* to the chord of the $\frac{6}{4}$ of that key, upon whose second degree it stands; it is, therefore, limited to progressions to certain fixed chords. We, consequently, reckon the progressions of *this* chord, as well, to *other* chords besides the above, to the *deceptive progressions.*

These, like those of the dissonant principal chords, are the more easily effected, the greater the similarity is between the irregular and the regular progressions; the least easily, when the seventh is obliged, contrary to its nature, to progress by a step upward.

To gain a proper conception of the following examples, it is necessary to strike the tonic triad each time before the subordinate chord of the seventh.

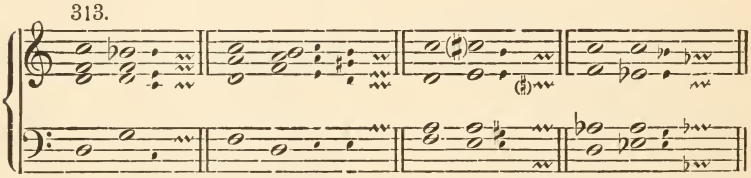
312.





Modulate to minor similarly. The above examples always choose the way through a dissonant principal chord, by preference the dominant chord. In the last example, the transformation of the subordinate chord of the seventh in *c*-minor to the minor chord of the seventh in *E*♭-major led directly into the triad of this latter key. Of course, progressions to the subordinate chord of the seventh, or the chord of the $\frac{6}{4}$ in other keys, are also practicable.

313.



Deceptive progressions with the subordinate chord of the seventh, in sequences:

314.



It may also be observed, that there are modulatory progressions of the $\frac{6}{4}$ chord nearly related to the deceptive pro-

gressions, by reason of the peculiar tendency of the $\frac{6}{4}$ chord to certain progressions (§ 13); e. g.:

315.



Exercise 47. I.

Form deceptive progressions with the subordinate chord of the seventh; likewise sequences and modulatory phrases in which this chord is employed.

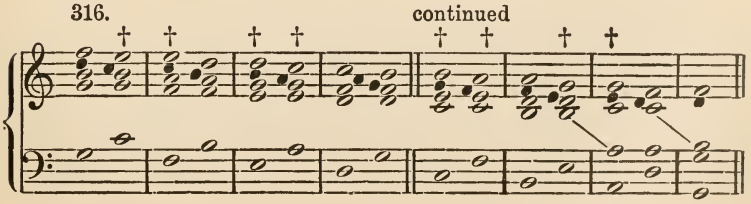
§ 67.

THE OTHER SUBORDINATE CHORDS OF THE SEVENTH.

The subordinate chords of the seventh on the first, third, fourth, and sixth degrees are classed among chords containing both harmonic and foreign tones, and are treated as such according to §§ 40 and 44.

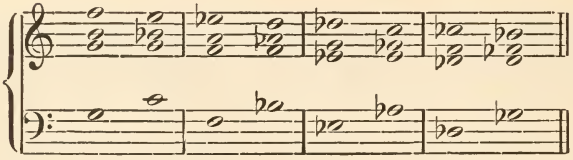
They usually resolve, one into the other, in such a way that, above a bass progressing in diatonic fourths and fifths, the third of each chord becomes the seventh of the next.

316. continued



We obtain this progressive chain of dissonances, which is also used in inversions, by divesting Sequence No. 310

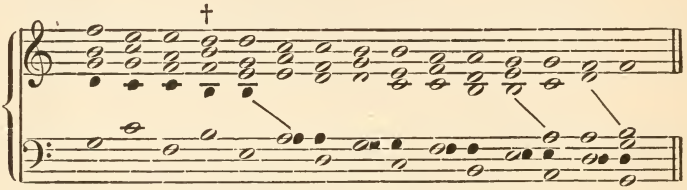
317.



of all chromatic signs.

Subordinate chords of the seventh combine with diatonic triads in:

318.



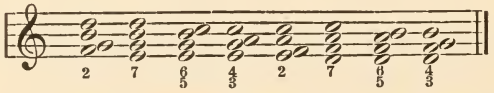
At † the diminished triad is treated like a consonant chord, this appearing justifiable here in view of the consistent leading of the parts.

Exercise 47. II.

Form progressions like the above, also with inversions.

These chords also afford opportunity in another way for a diatonic interlocking of dissonances, occurring with peculiar frequency in the works of the contrapuntists (Lotti, Bach, Handel), and among the moderns with Mendelssohn. Here the resolution of each dissonance produces another:

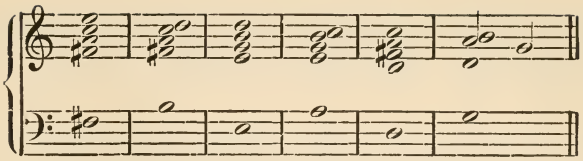
319.



Such series gain greater variety by the occasional entrance of a modulation or change of mode.

Subordinate chords of the ninth also occur in like series although seldomer. An example, in which diatonic chords of the seventh alternate with subordinate chords of the ninth, occurs in the *Finale* of Mozart's great symphony in C, (called "Jupiter"),

320.



This passage, of which a mere harmonic skeleton is given here, is made still more dissonant by the passing-tones of a two-part imitation and the doubling of the ninth below (which is forbidden in Elem. of Harm. § 133, and here in § 9).

The suspended chords of § 40, and all related combinations, may take part in modulatory treatment and deceptive progressions, being then usually included under the conception of *a change of key during the resolution of the suspension.*

321.

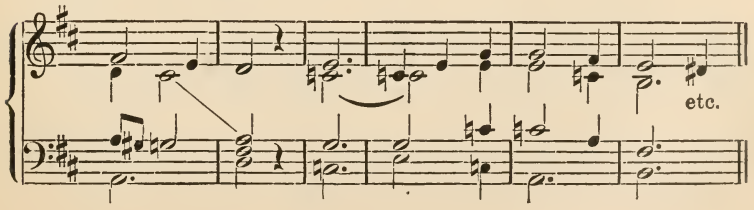


C. Progressions of Triads.

§ 68.

The direct succession of remote triads — which, before the era of the sovereign key, resulted quite naturally from the leading of the parts, and has in modern times been frequently employed for special artistic ends — can here be no object for practice, but merely one for remark. Below are a few examples, which might easily be multiplied by examples from the works of modern masters.

322.





§ 69.

CHORD-PROGRESSION AND MODULATION INDEPENDENT OF THE LEADING OF THE PARTS AND THE MELODY.

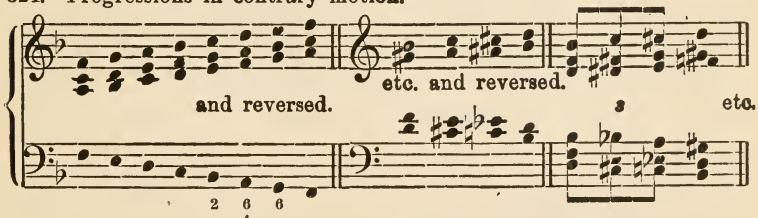
To effect parallel motion in all parts, or in as many as possible, taking solely into consideration the avoidance of parallel fifths and octaves, we form series of chords of the sixth, diminished chords of the seventh, etc., in diatonic, chromatic, or mixed progression.





The fourth part, added to the first two series of chords of the sixth, may easily be felt as a disturbing influence through its opposition to the smooth parallel motion of the remaining parts, for which reason these progressions are preferably employed in three parts.

324. Progressions in contrary motion.



The following harmonic leadings also result from the progression of all, or the separate, parts. Some, it is true, may be harmonically explained in another way. For the course of composition, and the composer as such, it is indifferent, which explanation deserves the preference. Researches in this connection are left to the Science of Music, which undertakes to solve as problems precisely those things, that the Theory of Composition takes for granted as the right of musical talent. (Comp. Introduction).

325.





(a) Here the semitonic progression of all parts leads directly from the *A*-major triad to the dominant chord in *E♭*.

(b) Here the degreewise progression of all parts results in a similar combination of apparently remote chords. But the chord *f-a-c-e♭* is here only a passing form between *e-g-b* and *d-f-b*.

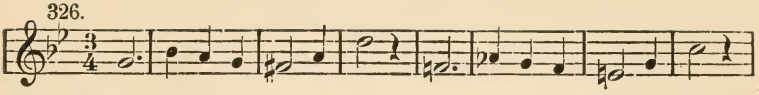
(c) Progression of triads and $\frac{6}{4}$ chords, induced by the leading of the outer parts.

(d) Here both chords belong to the same key (*d*-minor) as dominant triad and subordinate chord of the seventh on the fourth degree. Their progression results from the degreewise leading of the parts.

The other examples may be explained in like manner.

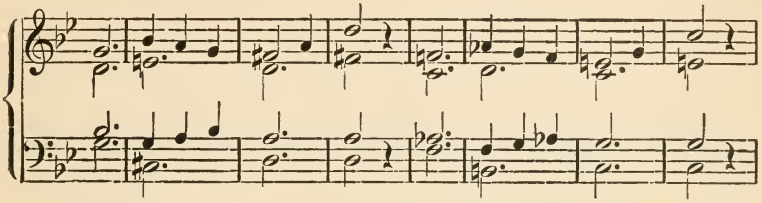
Another peculiar manner in which the melody governs the harmony must here find mention. It sometimes happens that the melody, or a part of the same, is repeated at an interval of one or more degrees higher or lower than the original. As a rule, such repetitions require exactly similar repetitions in the harmony, as a contrary treatment would be opposed to the character of the melody. In order to carry out this similarity the rules of harmony may, in case of necessity, be disregarded. For instance, the following melody

326.



literally repeats the first four measures a whole tone lower, and requires a like treatment of the harmony, despite the direct succession of the *D*-major and *f*-minor triads caused thereby.

327.



After performing these eight measures, a continuation with the *e♭*-minor chord would appear quite natural, because *e♭*-minor stands here in the same relation to the preceding *C*-major, as *f*-minor above to *D*-major, and the ear is thus prepared for this progression.

328.



§ 70.

EMPLOYMENT OF FOREIGN TONES IN MODULATION.

Hitherto we have had only occasional opportunity for employing foreign tones in modulating. Melodies for practice now follow, which are abundantly supplied with modulations and foreign tones. After the instruction given in Part II, all further information needed can be gathered from the following example.

Exercise 48.

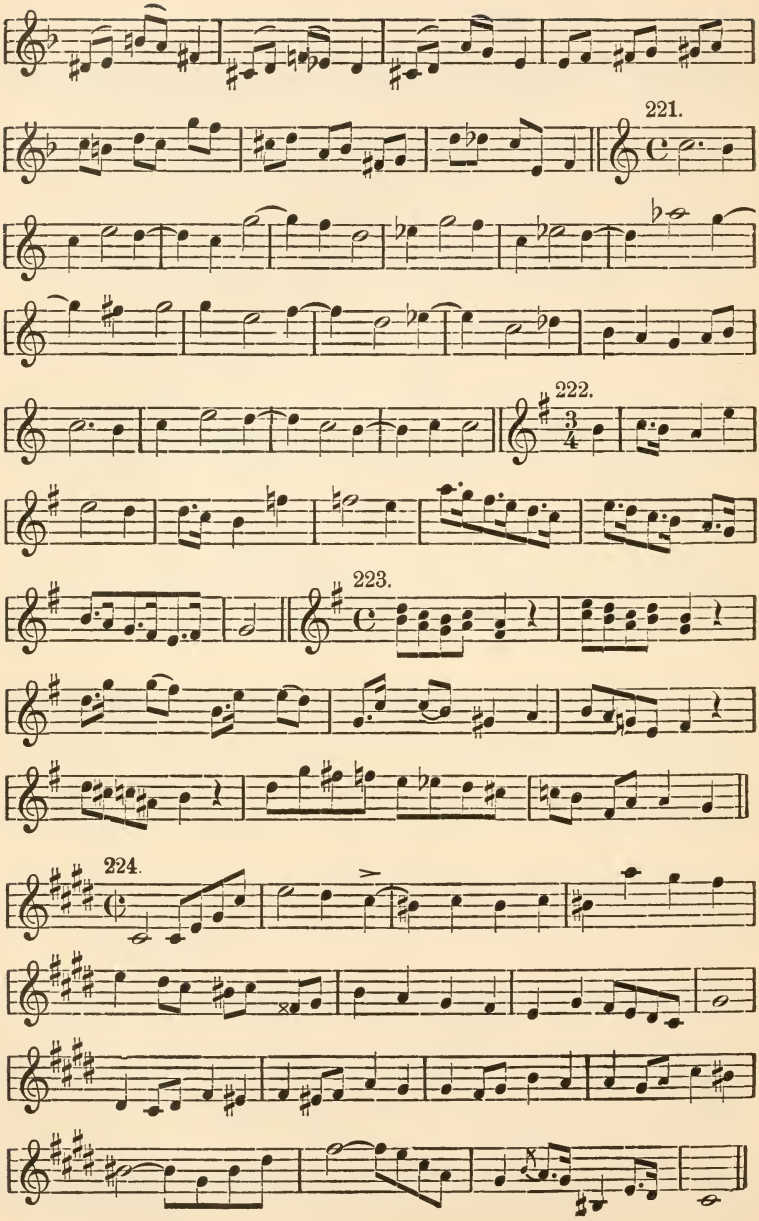
Work out in four parts the following melodies, which contain modulations and foreign tones. The pupil is of course, at liberty to lend more variety to the lower parts, and to fill out the rests harmonically, by employing foreign tones; but he is cautioned expressly not to overload the harmonies. Each of the following melodies can be worked out in various ways, and it is advisable to do this in some cases, at least.

Model 36.



Examples for Practice.




221.
222.
223.
224.

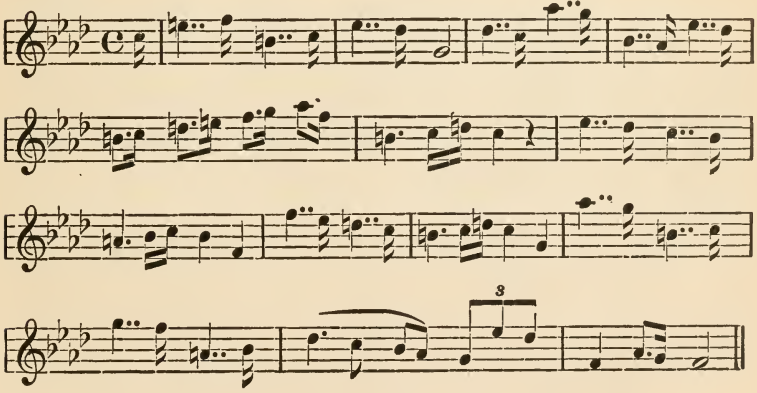
225.



226.



227.



IV. The Altered or Mixed Chords.

§ 71.

EXPLANATION OF THE TERM.

All chords as yet learned were composed of the tones of a single major or minor key, and were affiliated with the same. Such chords are therefore called *diatonic.*

Those chords, on the contrary, which cannot be formed with tones of that key with which they are affiliated, are called *mixed* chords. This term is founded on the idea, that they are composed of tones belonging to different (and thus *mixed*) keys. They are also called *altered* chords, as arising from diatonic chords through the (chromatic) alteration of single intervals.

In practical music, such harmonic combinations are considered as resulting from foreign tones, chiefly passing-notes and suspensions. Some of them, on account of their extremely frequent employment, are to be distinguished and used in practice as individual chords ; namely :

1. The chord of the sixth derived from the subordinate triad on the flatted second degree in minor;
2. The augmented chord of the sixth;
3. The augmented triad.

§ 72.

THE SUBORDINATE TRIAD ON THE FLATTED SECOND.

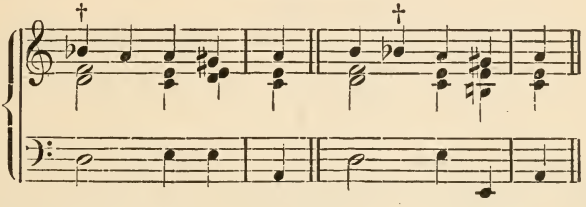
We have long been familiar with cadences formed with the sub-dominant triad and the subordinate triad on the second degree, *chiefly in its first inversion.* In minor the triad on the second is, as we know, diminished.

329.



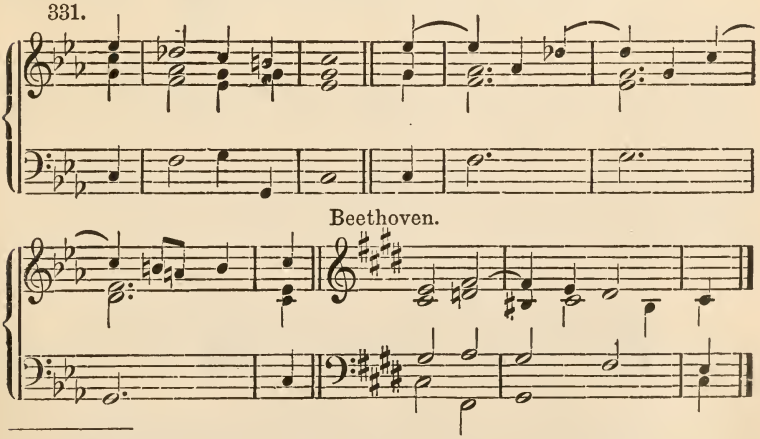
If (in minor) a minor sixth be suspended with the sub-dominant, or brought in as a chromatic passing-note in the highest part with the subordinate triad,

330.



there will result, as at †, the chord of the sixth of a major triad $b\flat$-d-f, which we call the triad on the flatted second, because it presupposes the flatted second of the key (here $b\flat$ in a-minor) as its fundamental. In this *first inversion* it enters independently in all cadence-like progressions instead of the sub-dominant triad or any substitutes for the latter.*

331.



* As a peculiarity of the school of the celebrated Neapolitan, Scarlatti, it was named the "Neapolitan chord of the sixth".

332. (a) (b)



At *(a)* we see an oft-recurring and harmonious form of the half-close with interpolated diminished chord of the seventh; at *(b)* the same with suspensions.

The root-chord itself, instead of the chord of the sixth, seldom occurs; the $\frac{6}{4}$ chord by way of exception, and with the succession (here forbidden) of two $\frac{6}{4}$ chords.

333.



Like other sub-dominant chords originally belonging to the minor mode it is also, although seldomer, used in the major mode.

334.



Explanation.

1. The $E\flat$-major triad enters, as subordinate triad on the flatted second, directly after D-major, and leads similarly back to the same, precisely like the regular diatonic triad on the second degree.

2. The same chord enters here in like manner, but is regarded and treated like a true $E\flat$-major chord, thus affording opportunity for a direct connection of $E\flat$-major with D-major.

3. Here the $E\flat$-major triad is again regarded as a subordinate triad, and shortly led back to D-major.

As a substitute for the sub-dominant, it may alternate with the other substitutes of that chord. A brilliant example from Beethoven follows:

335.



Explanation. Cadence in $E\flat$-major. In measure 5 our subordinate triad takes the place of the subordinate chord of the seventh, and leads through the dominant triad to the tonic triad.

336.



1. Here the direct succession of $c\sharp$-minor and C-major is justified by their similar relation to B-major as the substitute for the sub-dominant.

2. Same relation of b-minor and $B\flat$-major to A-major.

N.B. The works of the last two centuries exhibit innumerable examples.

Exercise 49.

1. Form cadences with this chord in the customary 15 minor keys and also in $e\sharp$, $b\sharp$, $d\flat$, and $g\flat$-minor.

2. Harmonize the following melodies.

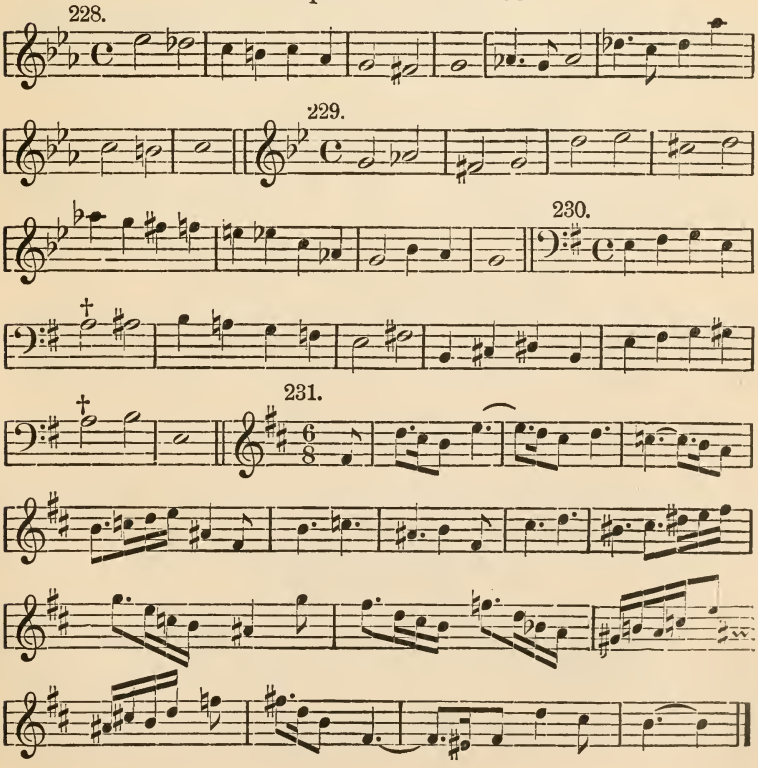
Model 37.



Explanation.

1. Passing-note in two parts.
2. Deceptive close.
3. Deceptive progression.
4. The *D*-major chord obtained by the deceptive progression is regarded as the triad on the flatted second in *c*♯-minor, and treated accordingly.
5. One of the commonest progressions of parts or triads, which is founded on § 26. (Comp. p. 169, No. 288, and § 168).
6. Here the *C*-major chord obtained by modulation is regarded as a subordinate triad to *b*-minor.

Examples for Practice.



§ 73.

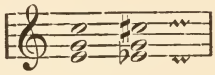
THE AUGMENTED CHORD OF THE SIXTH.

The augmented chord of the sixth is conceived as resulting

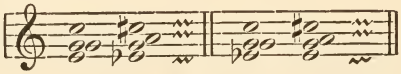
1. From the chord of the sixth derived from the minor triad, by a chromatic passing-note in the highest part:

337. 

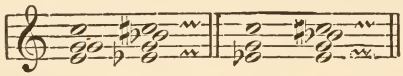
2. From the chord of the sixth derived from the major triad, by a chromatic passing-note in both outer parts:

338. 

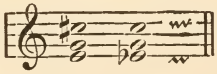
3. From both the above chords, by chromatic passing-notes as under 1 and 2, but together with a diatonic passing-note in an inner part:

339. 

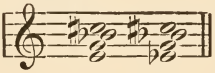
4. As above under 3, with the addition of the perfect fifth as a fourth ("filling-up") part:

340. 

5. From the chord of the sixth derived from the diminished triad, by a chromatic passing-note in the lowest part:

341. 

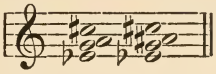
6. From the $\frac{6}{5}$ chord derived from the diminished chord of the seventh, in like manner:

342. 

7. From the $\frac{4}{3}$ chord derived from the dominant chord, in like manner:

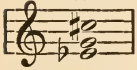
343. 

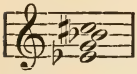
8. From this latter augmented chord of the sixth, by the double-augmented *fourth* taken as a passing-note:

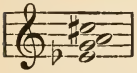
344. 

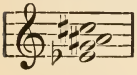
It therefore occurs in four forms:

345.

 with major third and augmented sixth,

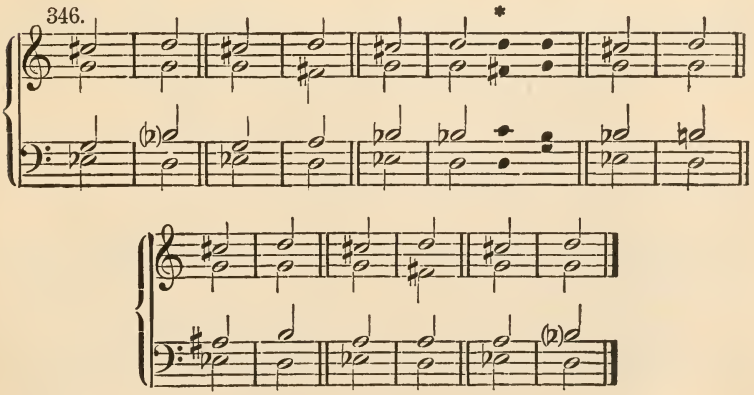
 with major third, perf. fifth, and augmented sixth,

 with major third, augmented fourth, and augmented sixth,

 with major third, double-augmented fourth, and augmented sixth.

In the second and fourth form it is regularly led to the $\frac{6}{4}$ chord; in the third, to the dominant triad, or seldomer to the $\frac{6}{4}$ chord. Thereby, the two parts forming the augmented sixth resolve degreewise in contrary directions. The first form can employ both progressions.

346.



* The two chords indicated here fill out each of the first four examples to a complete cadence.

The foregoing cases prove that the augmented chord of the sixth by far most frequently employed, is that formed on the second degree.

It resolves extremely seldom to the minor triad.

347.



It is then to be formed on the flatted second degree, and arises from the alteration of a diminished triad, dominant chord of the seventh, or the $\frac{6}{5}$ of the diminished chord of the seventh.

The augmented chord of the sixth is by far most frequently employed in the cadence instead of the sub-dominant, and in half-closes (Nos. 346, 348).

The higher parts of the augmented chord of the sixth can, of course, be transposed.

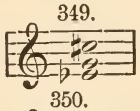
348.



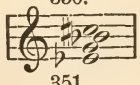
Root-chord, and inversions of same.

By going back to the fundamental forms of the augmented chord of the sixth we obtain:

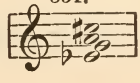
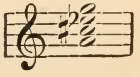
349.

from  a diminished triad with diminished third; 

350.

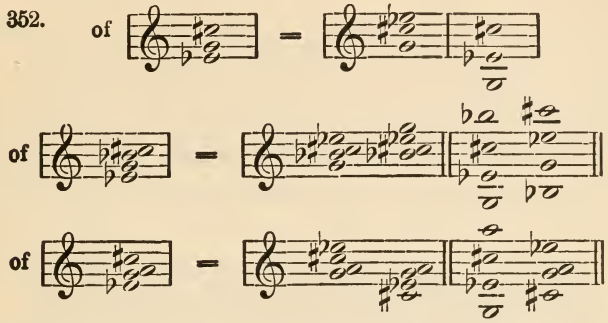
from  a diminished chord of the seventh with diminished third; 

351.

from  a dominant chord of the seventh with diminished fifth. 

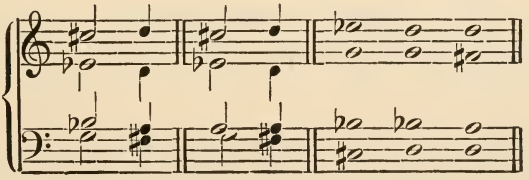
These occur, in works of this and the last century, both in the forms of sub-dominant and of dominant chords (again by far most frequently in the former), but very seldom in comparison with the augmented chord of the sixth itself. Inversions of the augmented chord of the sixth, or rather of its root-chord, are:

352.



These, as well as the root-chords, are preferably employed where the inversion of the augmented sixth to a diminished third is avoided; though they also occur in this form.

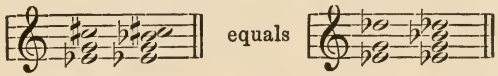
353.



Enharmonic changes.

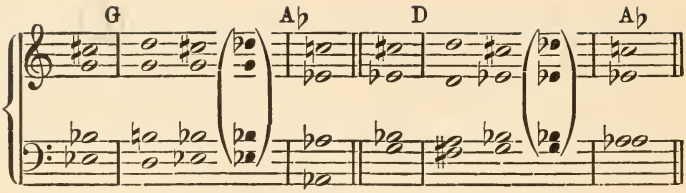
The three-part augmented chord of the sixth, and that with the perfect fifth, may be enharmonically transformed to an incomplete and a complete dominant chord of the seventh:

354.



through which means keys appear nearly connected, which are removed from each other by 5 or 6 degrees of affinity:

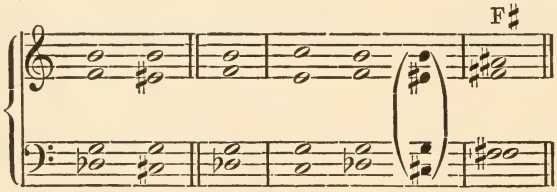
355.



We were already acquainted with similar transitions as deceptive progressions of the dominant chord (No. 295 [2, 3]; No. 311). Here they result from enharmonic changes.

The third form of the augmented chord of the sixth (with augmented fourth) may be enharmonically transformed into the root-chord of another augmented chord of the sixth of like kind.

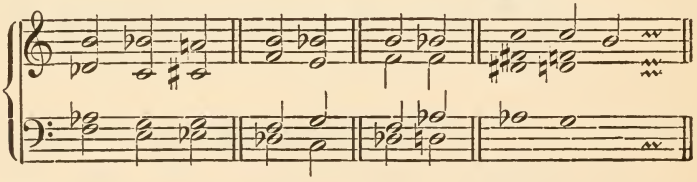
356.



Deceptive progressions

of the augmented chord of the sixth are formed according to familiar rules:

357. Mozart.



Combined with foreign tones:

358. Wagner, "Tristan."





Exercise 50.

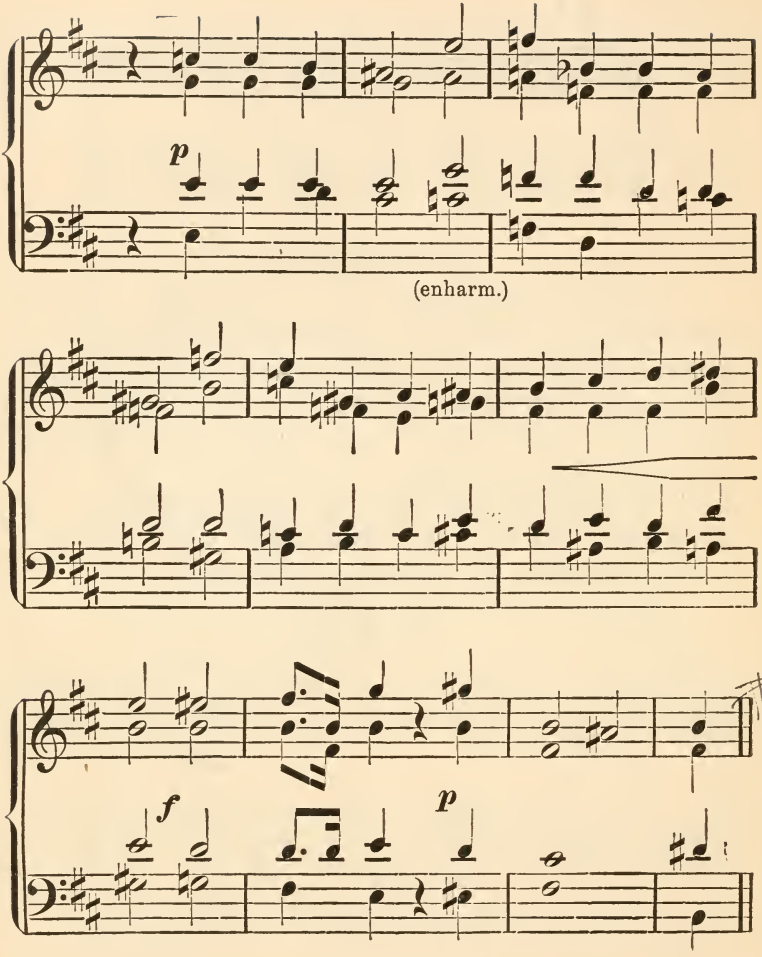
1. Play, with the augmented chord of the sixth, four-part cadences, modulations, enharmonic and deceptive progressions, sequences, and modulatory phrases, always fixed by retaining the augmented sixth (i. e.: avoiding the diminished third), **and by preference in open harmony** (this facilitating observation of part-leadings).

2. Play a few modulatory phrases containing root-chord and inversions of the augmented chord of the sixth.

3. Harmonize the following melodies.

Allegro. Model 38.





Examples for Practice.



233. *Andante.*

234. *Adagio.*

§ 74.

THE AUGMENTED TRIAD.

The augmented triad occurs as a diatonic chord in minor (§ 23). In this capacity we conceive it as resulting from a suspension; as, in the following examples, from the suspensions of the augmented fifth ($g\sharp$):

359.



in the next, from the suspension of the fundamental *(c):*

360.



As a mixed chord it is chiefly developed from the fifth of a triad used as a chromatic passing-note:

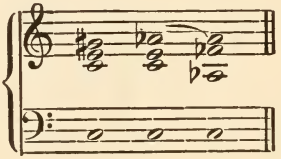
361.



Enharmonically

it may, by reason of its two similar intervals (major thirds), be transformed into the inversions of two other augmented triads.

362.



Deceptive Progressions

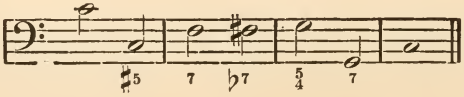
are obtained according to familiar rules. E. g.:

363.



In the cadence:

364.



Exercise 51.

1. Play, with root-chord and inversions of the augmented triad, regular, enharmonic, and deceptive progressions, cadences, sequences, and modulatory phrases, in four parts and in various keys.

2. Harmonize the following examples for practice.

Model 39.



Examples for Practice.

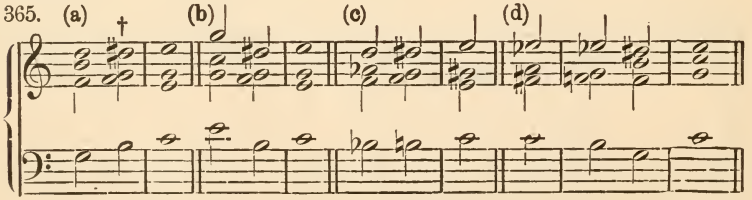


§ 75.

OTHER MIXED CHORDS AND SIMILAR HARMONIES.

Characteristic leadings continually produce, during actual artistic production (i. e.: outside of mere school-work), new formations of this nature, which are treated either regularly, i. e.. in accordance with the original harmonic significance, or enharmonically, or in the manner of deceptive progressions.

1. In the following example we see, at *(a)*, how a dominant chord of the seventh with sharp fifth results from a passing-note in the highest part; at *(b)* the same enters by a skip, at *(c)* as a link in deceptive progressions; at *(d)* it arises enharmonically from a dominant chord with simple suspension.



2. A similar chord, though bearing a quite different relation to the key, is moulded by Schubert as the last, intensest

means for expressing the unbearable burden of woe of world-bearing Atlas. Here is suspended, against the continued third and fifth of the *g*-minor triad, the flatted second of the key both in voice and pianoforte-bass, the voice then being led through the seventh of the key back to the triad, while the flatted second is still held in the bass. A chord is thus formed which, considered by itself, would first of all point to *E♭*-major. In this the pupil has one of the most striking, as well as most sublime, instances of the many-sidedness of the chords, according as they are referred to one key or the other: and likewise of the manner in which peculiar harmonic combinations arise in response to special artistic requirements.

366.



This same song also exhibits still other harmonic transitions of like pregnant significance.

3. Mozart writes, in the working-out of this motive

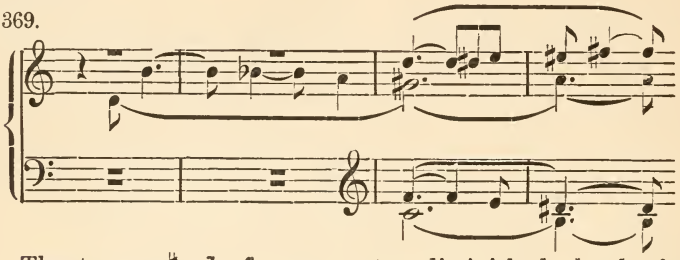
367.  in the *G*-minor symphony, whose first tone enters nearly throughout as a suspension, the following combinations of pure four-part suspensions, marked by †.

368.



4. Wagner, in his cumulative continuation of the opening to the Tristan Prelude (given at end of § 73), frames a freely-entering harmony, which is to be regarded as an augmented triad with suspension in two parts, and which makes a deceptive progression to a dominant chord of the seventh with simple suspension.

369.



The tones *g♯*, *d*, *f*, represent a diminished chord of the seventh, which combines with *c* (*third* of the key).

§ 76.

ORGAN-POINT.

Especially toward the close of emotional, pregnant compositions, a need is often felt, after the tonic is already gained and then sustained in the bass, to allow the movement in the higher parts still to continue above it—gently to expire, so to speak—whereby the suggestiveness of the close is enhanced.

370.



A similar phenomenon, as a preparation of the close, is often met with on the *dominant,* where all the parts convene, as it were, to celebrate the close.

371.



The tone held in such passages, or even the entire passage itself, is called an *Organ-point* (Elem. of Harm., § 137).

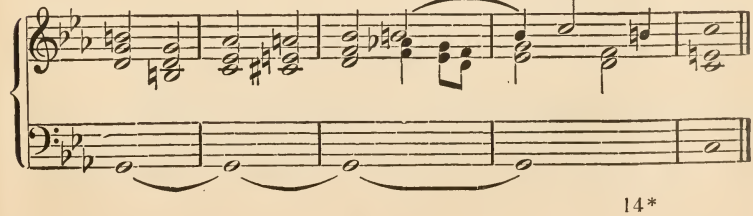
The character of the composition often demands, that the higher parts should overstep the harmonies and modulations, which stand in near affinity to the bass-tone and the key represented by it.

372.



Through the aid, in particular, of the chromatic progressions exhibited in § 69, which might in part be termed apparent modulations, organ-points gain the appearance of greater modulatory variety, even should these progressions not, in point of fact, overstep nearly-related harmonies.

373.



The sustained tone itself may appear as a tone oft-repeated, or interrupted by rests.

374.



Organ-points are also found at the beginning or in various places in compositions.

The sustained tone may likewise appear in the highest part, or one of the inner parts.

Mozart. (Harmonic Sketch.)

75.



In instrumental music the organ-point is not infrequently combined with foreign tones; comp. *Beethoven*, *A*-major symphony IV, *C*-major sonata Op. 2, III, coda; *Liszt*, *B*-minor sonata p. 18, meas. 319—327.

Exercise 52.

Form organ-points on Tonic and Dominant:

1. restricting modulation to nearly-related keys,

2. with free, but carefully considered modulation.

§ 77.

MODERN CLOSES.

Foreign tones and modulation, especially the combinations of triads treated of here in § 28 and illustrated by numerous examples from master-works in the author's "Partiturstudium" [Studies in Scoring], produce certain modern forms of the close, which appear to have affinity with the sub-dominant close (pp. 34—35). They usually follow the more or less distinctly marked dominant close; at times they replace it.



The first example is the sub-dominant close.

The second example was mentioned, as regular, by Rameau, the sub-dominant being represented by the subordinate chord of the seventh II; *b* is properly a passing-note.

The third is the same with raised *b*. Here, too, *f* might stand for *f*♯.

In example four, the third *c*♯ holds its own against the sub-dominant, thus forming the subordinate chord of the seventh IV.

In example five, only the *d*♯ entering by a skip is peculiar. With *a* sustained in bass, and *d*♯ moving degreewise between repeated *e*, we should have the common example of a passing-chord of the diminished seventh.

In example six, the raised dominant-fifth combines with the minor sub-dominant third to form an apparent *F*-major chord.

In example seven, $e\sharp$ is properly *f*, and the thirds of the tonic ($c\sharp$), dominant ($g\sharp$), and minor sub-dominant (*f*) are combined (§ 46).

In example eight, the most difficult to explain, the dominant is held throughout, while the tonic changes mode in the third, and the perfect fifth *of the third* appears as a passing-note.

All these examples, like most progressions of triads, are based upon the unreserved (or *universal*) recognition of the system of equal temperament, whose final establishment is to be traced to Bach's "Well-tempered Clavichord."

§ 78.

THOROUGH-BASS NOTATION.

The exercises with thorough-bass figuring in Part I noticed chromatic signs only for the seventh in minor. The employment of modulation naturally calls for a far more extended application of such signs.

Every interval taking a chromatic sign must, as before, be noted by a figure; excepting the third, to which any independent chromatic sign refers.

Where the figures are crowded, the relations of the chromatic signs might easily be mistaken; therefore, a part of these signs has been replaced by diagonal and perpendicular strokes, which combine more readily with the figure, and indicate that the interval in question is raised by a semitone, thus replacing the $\sharp$, $\times$, and $\natural$ respectively. This stroke intersects *diagonally* the 6, 7, or 9 in its upper or lower portion, and *perpendicularly* the 2, 4, and 5; or, in these last cases, is written *directly after* the figure. Thus we obtain 6, 7, 9, 2, 4, 5 (2|, 4|, 5|). No similar abbreviation for *flatted* intervals has come into use.

Foreign tones are also noted in thorough-bass figuring. But thereby not only the reading, but also the writing, of

foreign tones becomes much more tedious, than even the writing-out in notes. Now, as the essential advantage of thorough-bass notation for the composer consists in the saving of time attained through the same in sketching or fixing a musical thought, the theory of composition has nothing to do with a development through which this advantage is sacrificed. Its study shall, therefore, be left to the thorough-bass player.

Here follow some melodies, and basses figured in part, chiefly intended to afford practice in employing deceptive progressions and peculiar harmonic forms (§§ 69, 74). The pupil may add foreign tones at will to the figured basses.

Bach does not figure chords of the eleventh and thirteenth with 11 and 13, but with $\frac{7}{2}$, thus disregarding the *fifth* in the former and the *sixth* in the latter case would appear necessary, when figuring not merely for accompaniment, but also with the aim of fixing the chords.

Exercise 53.

Employ all harmonic material in forming cadences, harmonizing chromatic and enharmonic scales and repeated tones, and modulatory phrases.

Work out in four parts the following melodies and basses.

Model 40.





Examples for Practice.

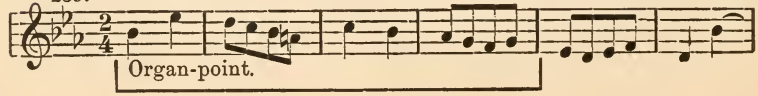
237.

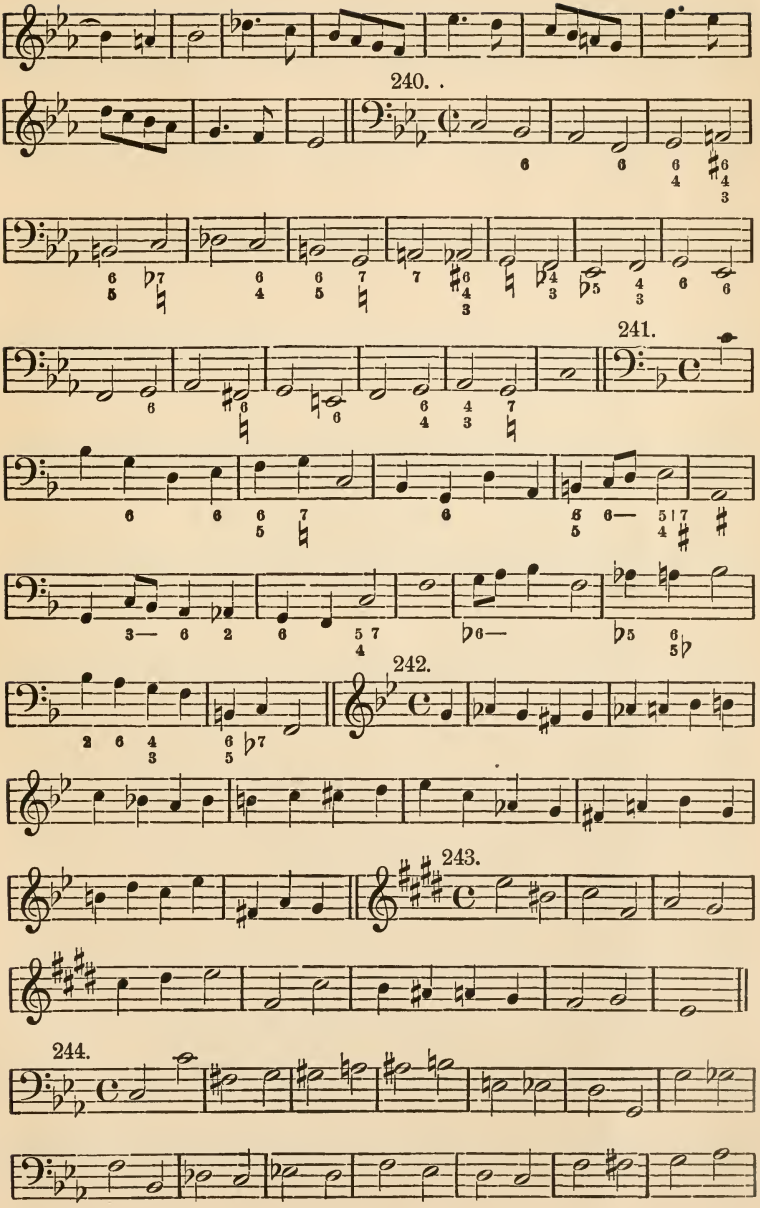


238.

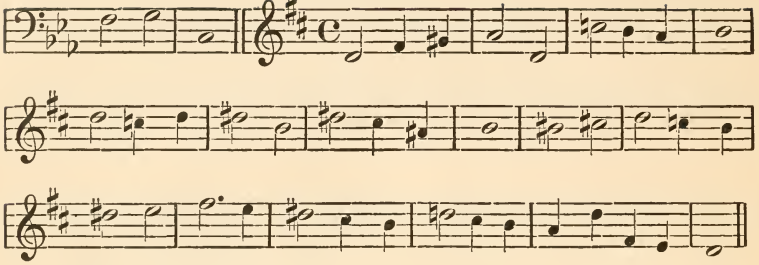


239.

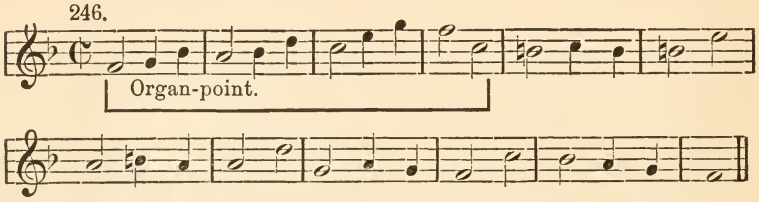



240.
241.
242.
243.
244.

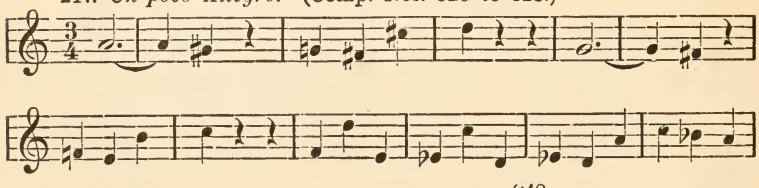
245.



246.



247. *Un poco Allegro.* (Comp. Nos. 326 to 328.)

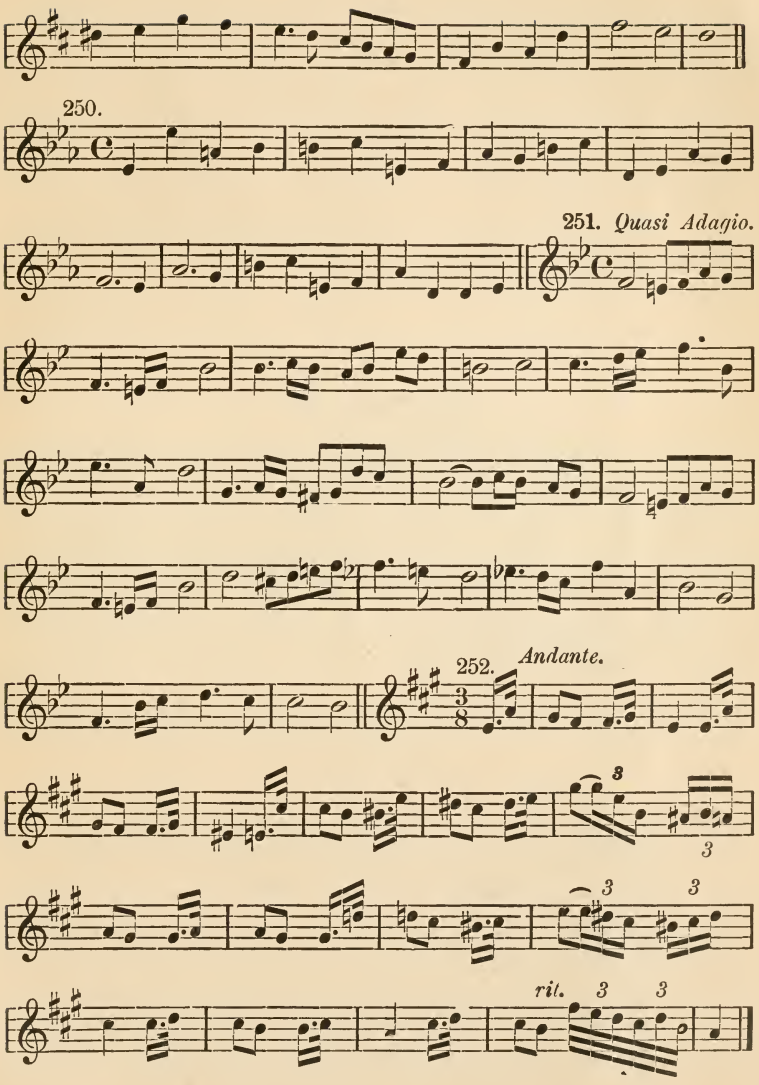


248.



249. *Allegro.*





Further material for practice is afforded by all chorales and folk-songs, the former given as soprano, bass, or inner part.

Some chorale-melodies belong to the old Church Modes, which are mentioned in the "Elem. of Harm.," § 116, and exhaustively treated of in "strict composition." For the present they are to be worked out with modulations; Dorian and Æolian as *minor*, Ionian, Lydian, and Mixolydian as *major*, Phrygian as *minor* from dominant to dominant. The Phrygian chorale **"O Haupt voll Blut und Wunden" was already treated by Bach usually, and now almost exclusively, as a major melody beginning and closing on the third.**

§ 79.

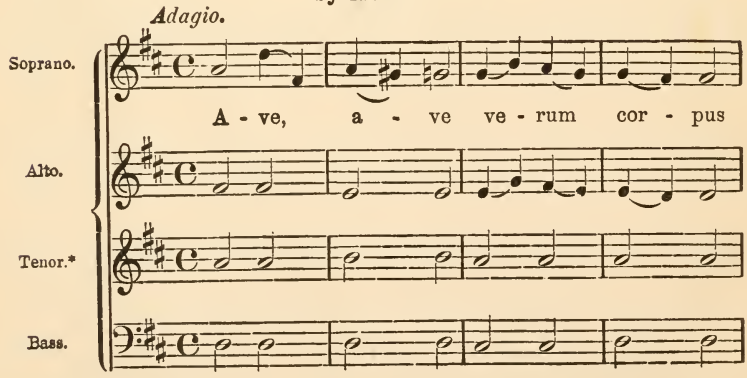
Exercise 54.

We now give, as a last model example, a perfect masterwork of harmonic composition, chosen from among many as best adapted for this purpose on account of its pregnant character within small compass. The pupil should analyze it in writing, with references to the sections of this hand-book.

For further study the chorales in Bach's "Passion of St. Matthew" are recommended.

Ave verum corpus,

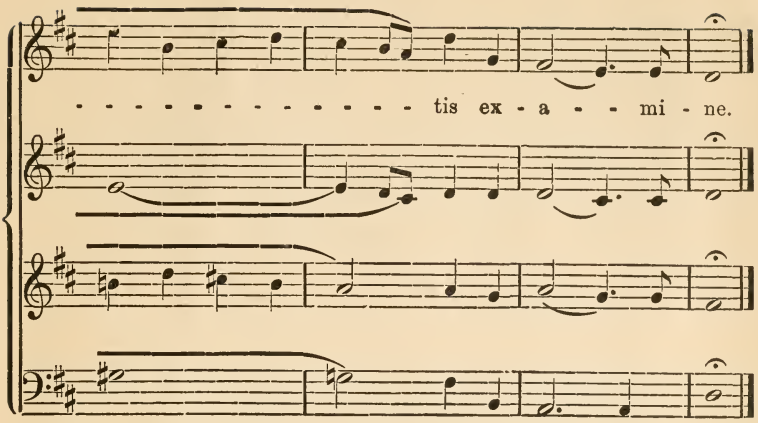
by Mozart.



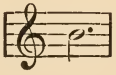
* Elements of Harmony, § 7.


na-tum de Ma-ri-a vir - gi - ne, ve - re pas - sum,
im - mo - la - tum in cru - - - ce pro ho - mi-
in cru - ce
im-mo - la-tum
ne; cu - jus la - tus per - fo - ra - tum un - da


A.
flu - - xit et san - - gui - ne; e - sto
no - bis—prae - - - gu - sta - tum in mor - - - -
e - - sto no - bis—prae - - gu - sta - tum in
B.
- - - - tis ex - a - mi - ne, in mor - - - - -
in mor - -
mor - tis



Mozart provided this composition with an accompaniment by string-quartet and organ, which also carries out prelude, interlude, and postlude, probably merely from outward consideration for the usages of Catholic church-music and for easier execution. At all events, this work has been long familiar in Germany as a pure vocal composition. Still, the omission of the accompaniment has occasioned a slight alteration in the 11th measure, the tenor in the original taking

377.  instead of 

This $g\sharp$ is borrowed from Mozart's instrumental bass.

With the words "esto nobis" (at *A*) a contrapuntal (canonic) passage begins, which consists in the imitation of the two higher parts by the two lower ones in a different interval of the key. This imitation closes with the first note of the 5th measure after the entrance of the male voices, on the first syllable of the word "mortis" (at *B*).

This work, from the last years of Mozart's life, shows what complete artistic mastery, paired with inspired genius,

can achieve within the limits of a very short and comparatively easily executed vocal composition.

After thoroughly working out the foregoing exercises, the intending student of composition or of the science of music will be prepared to begin the study of Counterpoint. This latter forms, in conjunction with the course in Harmony, the foundation for a complete and sterling technical mastery of composition.

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